

Council of the County Palatine of Durham.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

T. EUSTACE HILL, M.B., B.Sc. F.I.C.

INCLUDING A

Summary of the Annual Reports of the District
Medical Officers of Health,

AND OTHER RECORDS,

FOR THE YEAR,

1910.

SUNDERLAND :

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THE COUNCIL OF THE COUNTY PALATINE OF DURHAM.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH
COMMITTEE.

GENTLEMEN,

I have pleasure in presenting my Twentieth Annual Health Report. Its late issue is to be regretted, but great pressure of work has prevented me from completing it at an earlier date.

It is satisfactory to note, as I anticipated, that the population of the Administrative County as shown by the recent Census considerably exceeded the official estimate and consequently the mortality rates are for some years past more favourable than appeared to be the case.

The statistics for the County as a whole are calculated on the population revised in accordance with the recent Census.

It is also satisfactory to note that the total death-rate for 1910 was the lowest ever recorded, while the death-rate among infants and from the chief infectious diseases was much below the average of previous years.

Under the Housing, Town Planning, &c., Act., 1909, the appointment of a Medical Officer of Health was made a statutory duty on the part of County Councils and the Local Government Board were given power to prescribe by General Order the duties of County Medical Officers of Health. The Board have since issued an Order prescribing such duties. (See page 78.)

I wish to record my appreciation of the consideration and assistance I continued to receive from your Committee and from the officers of the district sanitary authorities in the discharge of my duties.

I am,

Mr. Chairman and Gentlemen,

Your Obedient Servant,

T. EUSTACE HILL.

October, 1911

THE ADMINISTRATIVE COUNTY.

Area.

The area of the county remains unchanged and no alteration occurred in the area of the individual sanitary districts.

Number of sanitary districts.

The Administrative County includes in its area five boroughs, 25 urban districts, 14 rural districts, and two port sanitary districts.

Changes in sanitary staff.

I have to record with regret the death of Dr. W. T. Bolton, who for a number of years acted as Medical Officer of Health for the Medomsley Division of the Lanchester Rural District. Dr. John Wilson, Medical Officer of Health for the Lanchester Division, was subsequently temporarily appointed Medical Officer of Health for the whole of the Lanchester Rural District.

In the Barnard Castle Urban District a vacancy, created by the resignation of Mr. F. D. Stuart, has been filled by the appointment of Mr. H. E. Raine as Surveyor and Inspector of Nuisances.

Printing of annual reports.

All the district annual reports, with the exception of that for Hartlepool Rural District, were printed. It is very desirable that all annual health reports should be printed, in order that copies may be available not only for each of the members of the district authority but for the inhabitants of the district who take an interest in sanitary matters. If only two or three type-written copies are made there is little likelihood of the reports receiving proper consideration.


POPULATION.

Revised estimates on 1911 Census.

The estimated population of the Administrative County at the middle of 1910 was 916,150 as compared with an estimated population of 898,840 in 1909. Both estimates are based upon the 1911 census and may, therefore, be regarded as fairly accurately representing the true populations in those years.

These populations are very considerably in excess of the estimates based on the figures of the 1901 census, viz., 854,800 for 1909, and 865,960 for 1910, and consequently the mortality statistics for several years past are really more favourable than was indicated at the time. In the table given below the preliminary results of the 1911 census are compared with the results of the 1901 census.

URBAN DISTRICTS:	Census Population.		Increase (+) or Decrease (-) of Population between 1901 and 1911.	Percent- age of Increase or Decrease.	1911.			
					Area in Acres.	Number of Persons per Acre.	Families or Separate Occupiers.	Number of Persons per Tenement.
	1911.	1901						
Darlington Borough	55,633	44,511	+	24	3,956	14.0	12,289	4.5
Durham	17,550	16,151	+	8	1,066	16.4	3,733	4.7
Hartlepool	20,618	22,723	-	9	735	28.0	4,265	4.8
Jarrow	33,732	34,295	-	7	783	43.0	6,940	4.8
Stockton	52,158	51,478	+	1	2,935	17.7	10,720	4.8
Anfield Plain	16,552	12,481	+	32	3,489	4.7	3,151	5.2
Barnard Castle	4,757	4,421	+	7	560	8.4	1,056	4.5
Benfieldside	8,355	7,457	+	12	1,525	5.4	1,713	4.8
Bishop Auckland	13,839	11,969	+	15	691	20.0	2,971	4.6
Blaydon	31,148	19,794	+	57	9,314	3.3	5,842	5.3
Brandon and Byshtolles	17,668	15,573	+	13	6,669	2.6	3,463	5.1
Chester-le-Street	14,713	11,753	+	25	2,511	5.8	2,971	4.9
Consett	11,209	9,694	+	15	1,005	11.1	2,238	5.0
Crook	12,310	11,471	+	7	4,056	3.0	2,533	4.8
Felling	25,020	22,467	+	11	2,684	9.3	5,279	4.7
Hebburn	21,766	20,901	+	4	1,241	17.5	4,273	5.0
Hetton-le-Hole	15,678	13,673	+	14	1,617	9.6	3,166	4.9
Houghton-le-Spring	9,753	7,858	+	24	1,551	6.2	1,980	4.9
Leadgate	4,990	4,657	+	7	1,836	2.7	1,025	4.8
Ryton	12,951	8,452	+	53	5,169	2.5	2,597	4.9
Seaham Harbour	15,759	10,163	+	55	1,101	14.3	3,169	4.9
Shildon	13,438	11,759	+	14	1,066	12.6	3,012	4.4
Southwick-on-Wear	13,789	12,643	+	9	856	16.1	2,767	4.9
Spennymoor	17,914	16,665	+	7	3,388	5.2	3,587	4.9
Stanhope	2,010	1,961	+	2	216	9.3	442	4.5
Stanley	23,300	13,554	+	71	3,593	6.4	4,523	5.1
Tanfield	10,105	8,276	+	22	4,779	2.1	2,044	4.9
Tow Law	4,327	4,371	-	7	477	9.0	932	4.6
Whickham	18,332	12,852	+	42	5,914	3.0	3,682	4.9
Willington	8,734	7,887	+	10	3,793	2.3	1,739	5.0
RURAL DISTRICTS.								
Auckland	58,365	51,505	+	13	57,334	1.0	12,010	4.8
Barnard Castle	11,681	10,924	+	6	79,961	0.1	2,571	4.5
Chester-le-street	63,882	48,799	+	30	32,109	1.9	12,798	4.9
Darlington	10,914	9,591	+	13	42,019	0.2	2,467	4.4
Durham	30,797	26,989	+	14	30,871	0.9	6,149	5.0
Easington	60,040	40,562	+	48	37,018	1.6	11,382	5.2
Hartlepool	3,355	2,884	+	16	19,090	0.1	522	6.4
Houghton	25,532	19,316	+	32	13,192	1.9	5,082	5.0
Lanchester	32,237	27,081	+	19	51,151	0.6	6,117	5.2
Sedgefield	33,711	20,355	+	65	45,006	0.7	6,286	5.3
South Shields	14,483	10,790	+	34	12,073	1.1	2,751	5.2
Stockton	17,527	14,819	+	18	34,539	0.5	3,779	4.6
Sunderland	29,007	22,786	+	27	6,980	4.1	5,605	5.1
Weardale	9,661	9,710	-	0.6	97,753	0.09	2,255	4.2
ADMINISTRATIVE COUNTY								
5 BOROUGHs	929,340	768,024	+	21	637,672	1.4	187,876	4.9
25 URBAN DISTRICTS	179,691	169,158	+	6	9,475	18.9	37,947	4.7
TOTAL URBAN DISTRICTS	348,467	282,755	+	23	69,101	5.0	70,155	4.9
TOTAL URBAN DISTRICTS	528,158	451,913	+	16	78,576	6.7	108,102	4.8
TOTAL RURAL DISTRICTS	401,182	316,111	+	26	559,096	0.7	79,774	5.0



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It will be noted that the population of the Administrative County increased by 161,316, equal to an increase of 21 per cent. as compared with an increase of only 15·7 per cent. for the 10 years 1891-1901. The increase was most marked in the rural districts, which were credited with an increase of 85,071 persons (26 per cent. increase), and least in the boroughs with an increase of only six per cent. In the urban districts (excluding boroughs) the rate of increase (23 per cent.) was little inferior to that obtaining in the rural districts.

Population.
Percentages of
increase.

Of the individual districts phenomenal increases occurred in Stanley (71 per cent.), Blaydon (57 per cent.), Seaham Harbour (55 per cent.), Ryton (53 per cent.), Whickham (42 per cent.), and in the rural districts of Sedgefield (65 per cent.) and Easington (48 per cent.). A decrease of population occurred in Hartlepool (9 per cent.), Jarrow (1 per cent.), Tow Law (1 per cent.), and in the Rural District of Weardale (0·6 per cent.).

Phenomenal
increases.

In my next annual report, when the revised census figures and other interesting information relative to the population of the county will be available, I hope to refer more fully to the subject.

Throughout this report the vital statistics for the Administrative County as a whole are calculated on the population based on the 1911 census figures; but for the individual urban and rural sanitary districts the populations given by the district medical officers of health are adopted.

Populations
used for
calculations.

BIRTHS.

The number of births registered was 29,858, a decrease of 552 as compared with the previous year. The birth-rate per 1,000 population was 32·5, which, though 1·3 lower than in 1909, was 7·4 per 1,000 in excess of the rate for England and Wales. The decline in the birth-rate is marked throughout the county, but it is satisfactory to note that a high rate is still maintained in the industrial districts. In the boroughs of the Administrative County the birth-rate appears to be rapidly approximating to that of the country as a whole, and I fear the circumstances responsible for the declining

Comparisons
with England
and Wales, etc.

District
birth-rates.

birth-rate throughout the country generally are also operating in these districts, as they are also in the residential and more agricultural parts of the county. The highest birth-rates occurred in Blaydon (37·7), Seaham Harbour (36·4), Ryton (36·3), and in the rural districts of Houghton-le-Spring (39·6), Chester-le-Street (36·6), and Easington (36·2), whilst the rate was below 20 in Stanhope, and in the Weardale Rural District, and was only 24·3 in Barnard Castle, 22·7 in Hartlepool Rural District, and 24·6 in Barnard Castle Rural District.

DEATHS.

Lowest death-
rate on record.

The total deaths registered in the County were 13,108, equal to a death-rate of 14·3 per 1,000 population, which is the lowest rate of which I have any record. In the previous year the deaths numbered 13,422, equal to a death-rate of 14·9. The marked decline in the total death-rate during the past two years is largely the result of the diminished mortality among our infant population, the reduction in the number of deaths from diarrhoea being especially marked. An unusual feature in the statistics is the fact that the death-rate in the five non-county boroughs (15·1) exceeds that of the other urban districts (14·3) and of the rural districts (14·2). This is also to be attributed to the relatively greater decline in the infant mortality rate in the urban and rural districts.

Causes of low
death-rate.

As to the causes operating in producing the further marked reduction in the County death-rate during 1910, unquestionably of first importance were the favourable climatic conditions which prevailed, there being no prolonged period of hot weather during the summer which is always so fatal to the infant population in industrial centres. A marked improvement in the general sanitary condition of a number of districts in the County has also undoubtedly been an important factor, but, as is pointed out in a number of the annual reports of the district medical officers of health, conditions still exist which must lead to an increased mortality should the climatic conditions again become favourable to the prevalence of such diseases as diarrhoea, enteric fever, etc.

The following table compares the death-rates for the county and for its urban and rural districts during the past five years with those for England and Wales :—

Death-rates
1906—10.

	1906.	1907.	1908.	1909.	1910.
England and Wales	15·4	15·0	14·7	14·5	13·5
Administrative County	17·0	16·4	16·7	14·9	14·3
Urban Districts	16·7	16·1	16·3	14·9	14·3
Rural Districts	17·4	16·7	17·4	14·8	14·2

It will be noted that satisfactory as has been the fall in the county death-rate, it nevertheless does not approximate so closely to the death-rate for England and Wales (13·5) as it did in the previous year.

Comparison
with England
and Wales.

The county death-rate was exceptionally low during the second quarter (13·2) and the third quarter (13·5), whilst it was highest in the first quarter (15·5), but only reached 14·9 in the last quarter. The death-rate was highest in Houghton-le-Spring (17·8), Leadgate (16·5), Durham (15·9), Benfieldside (15·8), Jarrow (15·6), and in the rural districts of Durham (16·7) and Easington (15·1), whilst it was lowest in Tanfield (10·3), Tow Law (10·5), Ryton (12·3), Hetton-le-Hole (12·7), and in the rural districts of Hartlepool (10·9), Stockton (11·3), Lanchester (Lanchester) (11·7), and Sunderland (11·7). The death-rates for 1910 for Jarrow, Consett, Felling, Shildon, and for the rural districts of Auckland, Chester-le-Street, and Stockton were the lowest that have been recorded in these districts.

Quarterly
death-rates.

District death-
rates.

The proportion of uncertified deaths to total deaths in the county area remains at 3·5 per cent., which is two and a half times the rate for England and Wales (1·4). Altogether 462 deaths were uncertified, the proportion of uncertified deaths being especially high in Darlington, Jarrow, Durham, Bishop Auckland, Felling, Shildon, and Spennymoor among the urban districts, and in the rural districts

Uncertified
deaths.

Unqualified
medical
practice.

of Darlington and Durham. Of the uncertified deaths 51 were uncertified owing to the attendance of unqualified medical practitioners, 38 of these deaths occurring in Spennymoor, and the remainder in Bishop Auckland (3), and in the rural districts of Auckland (3), Durham (2), Easington (4), and Sedgefield (1).

INFANT MORTALITY.

Continued low
infant-
mortality-rate.

The deaths of infants under one year of age numbered 3,772, equal to an infant mortality rate of 126 per 1,000 births registered. In the previous year the infant mortality rate was 124, which was by far the lowest rate ever recorded in the county. The infant mortality rate was highest in the rural districts (130), a rate of 120 obtaining in the non-county boroughs and the urban districts. Owing to the cold summer the rate remained low and was only 121 in the third quarter, though it rose to 148 in the last quarter, when some warm weather made the conditions more favourable for diarrhoeal diseases.

District infant-
mortality-rates.

The highest infant mortality rates occurred in Stanhope (205), Hartlepool (160), Houghton-le-Spring (160), Leadgate (156), Blaydon (147), Willington (146), and in the rural districts of Easington (153), Sedgefield (149), and Durham (145). On the other hand the rate was below 100 in Barnard Castle (80), Crook (93), Ryton (97), Bishop Auckland (99), and in the rural districts of Barnard Castle (77), Hartlepool (86), Stockton (86), and Lanchester (Lanchester) (94). In Durham, Hebburn, and Ryton, the infant mortality rate for 1910 was the lowest on record for these places. The rate for England and Wales (106), was again considerably below the county rate, and is the lowest ever recorded.

Causes of
decline in
infant-
mortality-rate.

As in the previous year, the climatic conditions were again favourable to infant life, and were no doubt very largely responsible for the comparatively low infant death-rate. In many of the annual reports of the district medical officers of health it is pointed out that the lowering of the infant mortality rate of recent years has been associated with considerable improvements, notably with regard to the abolition of ashpit-privies and the improvement of the surroundings of houses, but stress is also laid upon the fact that much work of this nature still requires to be done, and the importance of

educating parents in the feeding and management of their children is insisted upon in a number of instances. In the annual reports of the medical officers of health of Blaydon, Consett, Hebburn, Spennymoor, Willington, and the rural districts of Auckland, Chester-le-Street, Darlington, and Durham, favourable references are made to the work of Health Visitors and the adoption of the Notification of Births Act is recommended.

Infant
mortality.

The Notification of Births Act has worked satisfactorily in the districts in which it has been adopted, and the following table shows how marked has been the reduction in the infant mortality rate in those districts where it has been administered by the County Health Visitors:—

Notification of
Births Act.

COMPARISON OF INFANT MORTALITY-RATES (PER 1,000 BIRTHS) IN THE ADMINISTRATIVE COUNTY WITH THE INFANT MORTALITY-RATES IN CERTAIN URBAN DISTRICTS BEFORE AND AFTER THE ADOPTION OF THE NOTIFICATION OF BIRTHS ACT, 1907, AND THE APPOINTMENT OF HEALTH VISITORS IN THOSE DISTRICTS.

DISTRICT.	Average Infant Mortality Rate for the years 1899—1908.	Average Infant Mortality Rate for the years 1909—1910.	Reduction in Infant Mortality Rate in 1909—1910 as compared with 1899—1908.
Brandon Urban District...	178	135	43
Shildon Urban District ...	168	101	67
Southwick Urban District	180	131	49
Stanley Urban District ...	177	137	40
Average Infant Mortality- Rate for ABOVE DISTRICTS	176	126	50
Average Infant Mortality- Rate for the ADMINISTRA- TIVE COUNTY, less the above Districts.....	157	125	32
Average Infant Mortality- Rate for ENGLAND AND WALES	138	107	31

Notification of
Births Act.

It will be noted that in the districts where the Notification of Births Act has been adopted and Health Visitors appointed the reduction in the infant mortality-rate has been 18 per 1,000 births more than in the rest of the County.

Lady Health
Visitors and
their work.
Whickham U.D.

In the Whickham Urban District, where the Act was adopted by the District Council and three part-time Health Visitors appointed at the beginning of 1909, the infant mortality-rate has been reduced by 49 per 1,000 births during the last two years.

Stockton
Borough.

In Stockton Borough there has been a Health Visitor since 1902. The infant mortality-rate prior to that date averaged 166, but since the Health Visitor's appointment it has only averaged 135, and for the last two years, since the adoption of the Notification of Births Act, it has only averaged 121.

Adoption of
Notification of
Births Act and
appointment of
Health Visitors
throughout the
country.

Recently I obtained particulars from nearly 100 of the smaller urban districts in England where the Notification of Births Act has been adopted and Health Visitors appointed. I have summarized the information, and almost without exception the opinion expressed by the medical officers of health is very favourable, though in a few instances it is pointed out that sufficient time has not elapsed to enable a definite conclusion to be formed.

Infant-
mortality-rate,
comparison
with England
and Wales.

It will be noted from the table given above that though there has been a most satisfactory reduction in the infant death rate in the Administrative County during the last two years, a comparison with the figures for England and Wales (or even for the larger towns) places this county in a very unfavourable light. Thus for the year 1910 while the infant death rate for this county was 126, in England and Wales it was only 106, in the 77 great towns it was 115, and in the 136 smaller towns it was only 104; moreover during the last quarter of 1910 the infant mortality in Durham was higher than in any other county in England and Wales. No doubt the higher figure for Durham is partly the result of bad housing, and especially overcrowding of dwellings which is probably worse in this county than in any other part of England and Wales, but much of the excess is also attributable to ignorance on the part of mothers as to the care and feeding of infants, and to neglect of the most elementary health re-

quirements; and this ignorance and neglect can, I am quite convinced, be best combated by trained women health visitors calling at the houses, supervising births, and giving advice and friendly help, which is almost invariably much appreciated, and in the majority of cases as far as possible acted upon.

Infant
mortality and
Lady Health
Visitors.

During 1910, 2,125 births were notified under the Notification of Births Act in the four Urban Districts of Brandon, Shildon, Southwick, and Stanley, and of these 1,539 or 72 per cent. were notified by medical practitioners, while 10 per cent. were notified by midwives, and 18 per cent. by other persons. In the Brandon and Stanley Urban Districts only 2 per cent. of the births were notified by midwives, while in Southwick and Shildon 26 and 17 per cent. respectively of the births were so notified.

It is satisfactory to note that, so far as can be ascertained, omission to notify births in those districts was made in only 120 cases during the whole year, while in the Shildon district all the births were notified.

Referring to the work of the Health Visitor at Shildon, Dr. Fielden says:—"For many years I strongly urged your Council to appoint a Lady Health Visitor for this district, being fully convinced that her kindly visits and advice would undoubtedly tend to bring about an enormous saving of child life. In June, 1908, you decided to accept the offer of the County Council to provide one for a period of three years; and since January of 1909—with the exception of the two months—June and July, 1910—we have had the advantage of services—faithfully and efficiently rendered—and many persons have to me expressed their gratitude for the kindly and helpful visits they have received. I assure you, gentlemen, it is with feelings of heartfelt satisfaction that I have the pleasure to record the following striking statistics. Before the appointment of a Lady Health Visitor, the yearly average infantile mortality-rate for the 10 years 1899-1908, was 169 per 1,000 registered births, while the average for the two years 1909-1910, since her appointment and the adoption of the Notification of Births Act was only 101, showing a reduction in the infant mortality-rate of 68 per year."

Shildon U.D.

**Health Visitors.
Brandon U.D.**

Dr. Smith, of Brandon, reports that "the Health Visitor has been well received and that her advice has been appreciated and often acted upon. Also that the majority of infants are either partly or wholly artificially fed after the first week or so and in this direction she is able to use her influence with good results. There has been marked improvement in the cleanliness of many of the houses visited but there is still room for improvement in several cases."

Stanley U.D.

Dr. Benson, of Stanley, says:—"The Health Visitor's work is very satisfactory. The mothers seem ready and willing to accept good advice as to the dieting and general condition of the children."

Durham City.

Dr. Vann, of Durham, says:—"The years 1909 and 1910 were remarkable for the coldness of the summer months, and to this fact may in part be attributed the general decline in infant mortality. But there remains the further fact to be considered that whilst in the Administrative County the rate last year was slightly greater than in 1909, in the City a very considerable reduction had taken place. Some, if not most, of the credit for this most satisfactory improvement must be ascribed to the action of the Lady Health Visitor Committee; and I think it is evident that the labour of the Health Visitor in advising as to methods of infant feeding and teaching the necessity of cleanly houses and surroundings is bearing good fruit."

**Appointment of
Health Visitors
recommended.**

Referring to the desirability of appointing a Health Visitor, Dr. Meikle of Darlington R.D., says:—"Having given the question of infant mortality in your district a great deal of attention, I now consider that the importance of an accurate knowledge of the principles and practice of infant feeding can hardly be overestimated. The appalling mortality of infancy is due in no small degree either directly or indirectly to faulty feeding, and it would seem that this is due more often to ignorance than to lack of means; and in many instances gross ignorance is displayed in the clothing of children, and also as to the sanitary arrangements under which a child lives, and I hope the time is not far distant when a nurse will be appointed in your district to give instruction in infant rearing and help to decrease the number of infant deaths."

Again, Dr. Mussellwhite, of Spennymoor, says:—"It is the most unpleasant part of my annual report to have to call your attention year after year to the high infant mortality-rate of the district. Yet considering that in 1907 and 1909 our infant mortality-rate was the highest in the county, one cannot let the matter rest. It is true there is some little improvement in 1910, but this I feel sure was only due to the weather. Given another hot dry summer there is little doubt that we shall be in our old unenviable position. Many of you I know doubt whether the appointment of a lady health visitor would effect much improvement. I can only refer you to the county medical officer's report for 1909, in which he states that in every case in which they have been appointed to a district there has been a distinct improvement in the infant mortality rate. The Council will remember that a few years ago I tried to induce them to join with the Shildon Urban District Council in the appointment of a lady health visitor. Unfortunately my efforts proved fruitless. The Shildon Urban District Council have since obtained the services of a lady health visitor and it is instructive to compare the figures.

" Infantile mortality rate	average 1898 to 1907	1908	1909
" Spennymoor	188	169	173
" Shildon	181	101	96

" These figures show that given a like improvement to that which obtained in Shildon, 52 infants' lives might have been saved in 1909."

Dr. Lawrence, of Darlington Borough, says:—"In my opinion much is needed to educate the mothers of the working class population, as to the absolute necessity of keeping their homes clean and airy if the children are to be kept strong and healthy. From their very earliest days, children should be out of doors nearly all day, and have their windows well open at night. In addition to this, the baby should, as far as possible, be fed on the breast for the first nine months. With breast-feeding, cleanliness, and plenty of out door life, the death-roll among infants would be greatly diminished. It is difficult to say which is the more important to the welfare of the infant, the food, or fresh air.

Lady Health
Visitors.

"I am almost inclined to think that a baby brought up on the out of door system has the best chance of survival, even though the food given be very unsuitable, but if kept indoors in a dusty, unventilated room, its chance of becoming a healthy adult is indeed meagre. The education which is now being given to mothers, by the schools' doctor and nurse, will in due time bring about a considerable improvement in the cleanliness and ventilation of the homes, and improve the entire hygiene of the class to whom their ministrations are devoted."

More general
adoption of
Notification of
Births Act
recommended.

It is very much to be regretted that the Notification of Births Act has not been more generally adopted in this industrial county. The benefits resulting are undoubted, and very greatly outweigh the comparatively small cost entailed in efficiently administering it by properly trained health visitors, who might also be most usefully employed in the home supervision of consumptive patients, defective school children, etc. The question of the adoption of the Act by the County Council for the whole county is deserving of very serious consideration seeing that the majority of the district authorities show no disposition to do so individually for their districts.

L.G.B. Report
on Infant and
Child Mortality
in England and
Wales.

During 1910 a very valuable report was issued by the Local Government Board on Infant and Child Mortality in England and Wales, which entirely confirms the views I hold on this matter. Especial attention is given to the high rates in the industrial counties, among which the counties of Glamorgan and Durham have the highest rates. Frequent reference is made in the report to the conditions existing in the County of Durham which are prejudicial to infant life, and the following quotation deserves special notice:—"The defects of sanitation which are specially associated with excessive infant mortality come under one of three heads. Commonly all three occur in the same districts.

"(1) Conservancy methods of disposal of excreta.

"(2) Inefficient scavenging of domestic refuse, and still worse inefficient scavenging when the contents of pail-closets and privies have to be emptied.

"(3) Unpaved or unmade-up roads and back streets, and unpaved back yards of dwellings.

“ All these lead to dirtiness of the environment of the house,
 “ to treading of dirt, often of excretal origin, into the house, to a
 “ lowering of domestic cleanliness, and—what is perhaps worse—to
 “ the disheartening of the overworked mother, who wearies in her
 “ house-pride, which is constantly being thwarted by the terrible
 “ condition of things outside the back door.

“ A large part of the densely populated parts of the counties of
 “ Durham and Glamorgan and certain parts of Lancashire, Stafford-
 “ shire, and Yorkshire, are in a profoundly lower condition as
 “ regards elementary sanitation than other parts of England.”

“ The extracts given in Appendix II give striking illustrations
 “ of the fact that *this insanitary barbarism continues in certain*
 “ *districts in the face of faithful advice and warning from medical*
 “ *officers of health, who, by giving this advice, may incur the risk of not*
 “ *being re-appointed when their limited term of office ends. In other dis-*
 “ *tricts amelioration is in progress; sometimes with a slowness which*
 “ *appears to imply that pockets are to be considered more than lives.*”

The report particularly deals with infant mortality during the year 1908, and in that year Durham had the highest infant mortality rate in England and Wales with the exception of Glamorgan, while the mortality among infants under three months old was higher in the County of Durham than in any other county. It is pointed out in the report that “ the subject of child mortality is of national
 “ importance. As shown by the statement below, one out of three
 “ deaths at all ages occurs under five years of age, one out of five
 “ during infancy, and one out of nine total deaths at all ages occurs
 “ under three months of age ”; that “ infant mortality is the most
 “ sensitive index we possess of social welfare and of sanitary admin-
 “ istration, especially under urban conditions ”; and that “ the
 “ responsibility of the Local Authorities consists in efforts to provide
 “ a decent environment for every home; in the training of scholars,
 “ especially of the elder girls, in domestic economy and hygiene :
 “ arranging for visits, soon after the birth of infants and at intervals

“ afterwards, of competent and tactful health visitors. The parents
“ are responsible for abstinence from such indulgences as will lower
“ the standard of domestic life by leaving insufficient margin for
“ adequate housing, food and clothing. They are responsible also
“ for the intelligent use of every available means for the improve-
“ ment of personal health, including domestic cleanliness and their
“ share in the sanitary control of the district in which they dwell.”
From among the specific recommendations of the Chief Medical
Officer mentioned in the report (pages 76 and 77) for the reduction
of infant mortality the following may be quoted.

(5) “ Experience is already showing the value of
“ the work being done by health visitors, who, under present con-
“ ditions, form an almost indispensable aid in influencing mothers
“ in the management of their infants. (6) The adoption of the
“ Notification of Births Act is a necessary preliminary to the gi- ing
“ of such aid promptly; and I hope that ere long this Act will be
“ generally adopted in country districts as well as in large towns.”
“ (7) The efficient administration of the Midwives Act, the adop-
“ tion of the Notification of Births Act and of additional arrangements
“ for giving instruction in infant hygiene are urgently called for in
“ the counties in which infant mortality is excessive ”; and “ (8) the
“ measures indicated above furnish an incomplete remedy in the
“ counties in which insanitary conditions are rife. Sanitary authori-
“ ties in compactly populated districts should decide to remove all
“ dry closets if a water-carriage system is practicable, to introduce
“ and maintain efficient scavenging, and to provide for the satis-
“ factory paving of streets and yards when required. Doubtless
“ these measures will be expensive; but they are much more
“ economical than the sickness and impaired efficiency of the popu-
“ lation which are their alternative; and no sanitary authority can
“ justify neglect in undertaking these elementary tasks.”

The County of Durham is one of the eight counties
specially mentioned where the sanitary authorities “ are
“ most urgently called upon to perform more com-
“ pletely their primary duties,” and in respect to these counties
it is said “ doubtless in each of those counties there are sanitary
“ authorities already doing their duty; but their influence on the

“statistics of each entire county, so far, is concealed in the total
“results.”

**L.G.B. Report
on Infant and
Child Mortality
in England and
Wales.**

Respecting the Administrative County of Durham I must point out that this last statement does not now quite represent the facts, for during the past five years there has been a marked reduction in the infant mortality rate. Thus for the ten years ending 1905 the infant mortality-rate for the Administrative County of Durham was 164, while for the five years 1906-1910 it was only 139. In fact during the past five years the infant mortality-rate for the Administrative County of Durham has been considerably less than was the infant mortality rate for England and Wales during the ten years ending 1905, though since that period there has also been a very marked decline in the rate for England and Wales.

It is pointed out in the report that infant mortality is the most sensitive index we possess of social welfare and sanitary administration, especially under urban conditions, and the report also proves that a heavy infant mortality does not represent a weeding out of delicate infants, for in districts where the infant mortality is persistently high there is also an excessive death-rate at later age periods. The report ought to be studied by all interested in this vital question of infant life.

ZYMOTIC DISEASES.

The seven principal zymotic diseases, the deaths from which are included under this heading, are smallpox, scarlet fever, diphtheria and membranous croup, fevers (enteric, continued and typhus), measles, whooping cough, and diarrhoea, and they were responsible during 1910 for 1,407 deaths, equal to a death-rate of 1.53 per 1,000 population. This is one of the lowest zymotic death-rates ever registered in the county and is the same as the rate in the previous year when there were 1,383 deaths. The rate for England and Wales (1.01) for 1910 was also exceptionally low. An unusual feature occurs in the statistics this year, namely, the zymotic death-rate in the non-county boroughs (1.55) exceeds that for the other urban districts (1.45) and is only slightly lower than that in the rural districts (1.59). This appears to be chiefly due to the fact that there was a great saving of life in the industrial districts in the county owing to the lessened prevalence of diarrhoea.

**Continued low
zymotic death-
rate.**

**Comparison
with England
and Wales.**

Zymotic
Diseases.District death-
rates.

During the first and second quarters the zymotic death-rates were 1·20 and 1·06 respectively, but rose to 2·12 in the third and fell to 1·07 in the last quarter. In the previous year the zymotic death-rate was remarkably uniform, varying from 1·45 in the second quarter to 1·88 in the third quarter. The highest rates occurred in Blaydon (3·01), Jarrow (2·41), Willington (2·38), Whickham (1·79), and in the rural districts of Durham (2·19) and Sunderland (1·95), whilst it was unusually low in Barnard Castle (0·43), Stanhope (0·49), Hetton-le-Hole (0·66), Houghton-le-Spring (0·68), Crook (0·75), Stanley (0·80), Leadgate (0·81), and in the rural districts of Barnard Castle (0·66), Lanchester (Medomsley) (0·76), Darlington (0·82), and in the Derwent and Stanhope divisions of Weardale.

Chief vital
statistics.

In the following table the chief vital statistics of the Administrative County during 1910, and of its urban and rural districts are compared with those of England and Wales:—

1910.	Total Urban Districts.	Rural Districts.	Adminis- trative County.	England and Wales.
Birth-rate	31·9	33·4	32·5	25·1
Death-rate	14·3	14·2	14·3	13·5
Zymotic Death-rate ...	1·49	1·59	1·53	1·01
Infant Mortality-rate ...	122	130	126	106
Small-pox	Nil.	Nil.	Nil.	0·00
Scarlet Fever	0·07	0·07	0·07	0·07
Diphtheria and Mem- branous Croup... ..	0·12	0·21	0·16	0·12
“Fever” (Enteric and Continued)	0·09	0·09	0·09	0·05
Measles	0·19	0·18	0·19	0·23
Whooping Cough ..	0·26	0·21	0·24	0·24
Diarrhœa	0·72	0·81	0·76	0·30

It is to be noted that there is remarkable uniformity between the statistics of the urban and rural districts, neither of which in consequence diverge very appreciably from those of the county as a whole. In the rural districts a higher birth-rate is still maintained, and it will be noticed that the death-rate is slightly lower, whilst the infant mortality rate is appreciably higher. The death-rates from the infectious diseases are approximately the same in the two groups of districts. In the table on page 86 it will be seen that the statistics for the boroughs compare unfavourably with the rest of the county, the birth-rate being low, and the death-rate, zymotic death-rate, etc., above the average. Comparison is only favourable in the case of the infant mortality rate (122), which is the same as that obtaining in the urban districts and lower than the rate for the rural districts (130).

Zymotic diseases—
uniformity of
urban and rural
death-rates
from.

SMALLPOX.

Cases were reported from the River Tyne Port (1) and Hartlepool Port (1), in January and October respectively. In the County Borough of South Shields 11 cases were also reported during the months of January, February, April, May, and June, and it is probable that some of these cases directly or indirectly infected three cases which occurred in the months of May and June in Harton Workhouse, situated in the South Shields Rural District. No cases were notified in any other district.

Each year brings fresh evidence that the proportion of unvaccinated children in the county is rapidly increasing, partly owing to the fact that exemption certificates can now so readily be obtained and partly because the county has for a long period enjoyed comparative immunity from smallpox. Several of the district medical officers of health in their annual reports express themselves strongly on this matter. Dr. Taylor, of Chester-le-Street Rural District, says:—"Up to 1907, the district was a fairly well vaccinated one, "but since that time the number of unvaccinated children has "increased by leaps and bounds . . . The district has now "reached the stage that nearly one-sixth of all the children under "seven years old are unvaccinated." Dr. Taylor concludes as follows:—"Whatever is said for or against vaccination theoretically, "and as to the rights of a parent to rule his own household as he

Vaccination.

“pleases so long as that is humanely done, no one who has had
 “an opportunity of comparing the condition of an unvaccinated
 “person suffering from smallpox, and a vaccinated person suffering
 “from the same disease, could for one moment say that vaccination
 “was anything but beneficial to the sufferer. . . . Exemptions
 “will increase, and in a few years the exception will be the vac-
 “cinated, and then we shall have reverted to the state of affairs of
 “60 years ago, when deaths from smallpox were numerous, and
 “facial disfigurement was seen at every step. At that time in some
 “parts of the country every fourth person one met was ‘pock
 “marked,’ but such a state of the face is practically never seen
 “to-day. One may say that ‘beauty is only skin deep and when
 “scratched is gone,’ yet beauty to the gentler sex is something they
 “highly value, and the loss of that beauty lessens the lady’s chance
 “in the matrimonial market.”

Dr. Vann, of Durham, says:—“The whole blame would rest
 “with the extraordinary facilities now provided for evasion of vac-
 “cination.”

Dr. Fielden, of Shildon, says:—“No case was reported in this
 “district, but the disease showed itself in other parts of the county.
 “It still continues in London and other parts of England, Bury in
 “particular, and people are becoming panic-stricken and hurrying
 “to obtain the protection offered by vaccination, upwards of 2,000
 “having been vaccinated in the course of a week, additional vac-
 “cination-stations having had to be arranged for at short notice.
 “I cannot urge too strongly the advantage of vaccination as a pre-
 “ventive measure. With the experience of over 100 years before
 “us and the terrible object lessons from time to time presented to
 “us, I cannot find words sufficiently strong to urge every man to
 “see to it that he and his are protected by thoroughly efficient
 “vaccination and re-vaccination; and now is the time to do it, not
 “when overtaken by panic.”

In the CountyBorough of Gateshead nearly 50 per cent. of the
 children born during the past 10 years are unvaccinated, and in
 Felling and other districts there is, I know, a very large
 proportion of unvaccinated children.

SCARLET FEVER.

This disease was less prevalent and fatal than in the previous year, 3,419 cases and 70 deaths occurring, as compared with 3,737 cases and 80 deaths in 1909. In the last quarter of 1909 this disease was unusually prevalent throughout the county and this high incidence continued during the first four months of 1910. There was then a marked fall in the prevalence which was maintained throughout the year except in a few urban districts. A uniform death-rate occurred in the urban and rural group of districts, and the death-rate for the county (0·07) was the same as that for England and Wales. The disease was most prevalent in Darlington (where there was a serious epidemic during the last quarter), Stockton, Blaydon, Spennymoor, and in the rural districts of Auckland, Sedgefield, and Sunderland.

District
incidence.

Reference is again made by several of the district medical officers of health to the spread of the disease by mild, unrecognised cases. Dr. Mussellwhite, of Spennymoor, for instance, says :—“ As “ I have said in my former reports I feel sure that this disease is “ spread by mild cases of the disease which often are not seen by a “ doctor at all. In the case in Stratton Street, I received a notifi- “ cation of a case of scarlet fever. On investigation I found one of “ the children had suffered from a sore throat ten days earlier (he “ had not been seen by a doctor) but was peeling and had infected “ four other members of the family. In two instances I have found “ three members of a family all in the same stage of the disease and “ apparently infected at the same time, but have not been able to “ trace the source of the infection. The way in which little out- “ breaks have been grouped about certain parts of the district not “ having a common milk supply or attending the same school, “ together with the fact that many of the children were below school “ age strongly suggests the presence of unnotified cases.”

Causes of
spread.

Again, Dr. Stobo, of Sunderland Rural District, says :—“ The “ number of cases notified during 1910 was greater than any year “ since 1901. Scarlet fever became prevalent in your district “ in the latter part of 1909, and continued almost in epidemic form “ until the spring of 1910. The incidence was most marked in the “ parish of Tunstall.

Scarlet fever.

“ Although most of the cases were of a very mild type, there
“ was a larger number of severe cases than in 1909—many of them
“ with kidney complications. Mild, unrecognised cases have again
“ been the source of much difficulty in controlling the epidemic,
“ desquamation being frequently the first distinct evidence of the
“ disease. Greater care should be exercised in allowing patients
“ to mix with others after they have apparently recovered from
“ scarlet fever. I am not at all convinced that the secondary cases
“ are always the result of faulty disinfection. The throat and nose
“ seem to retain infection long after the apparent symptoms have dis-
“ appeared, and this is suggested by a return of the nasal discharge.”

DIPHTHERIA AND MEMBRANOUS CROUP.

There was again a slight increase in the number of notified cases of this disease, but it is satisfactory to note that there was no increase in the death-rate, as is shown in the following table:—

Diphtheria and Membranous Croup.	ADMINISTRATIVE COUNTY.				
	1906.	1907.	1908.	1909.	1910.
Cases notified	1298	1108	1146	1152	1258
Deaths registered	168	169	152	149	150
Death-rate per 1,000 population	0·19	0·19	0·17	0·16	0·16

In the urban districts the death-rate remained low, being equal to that of England and Wales (0·12). The rate in the rural districts (0·21) was slightly below that of last year.

District
incidence.

In no quarter was there any exceptional prevalence of the disease, and the incidence showed a satisfactory decline during the latter half of the year. There was, however, an increased prevalence in Jarrow and Shildon, in the rural district of Barnard Castle, and in portions of the Easington and Durham rural districts. In Jarrow, where 61 cases were notified as compared with 27 in 1909, the medical officer of health was unable to detect any cause for the

increased prevalence, and in his opinion probably some undiscovered carriers were responsible. Cases of the disease appeared in the schools situated in the affected wards, but the incidence was not especially high. As a precaution, however, no child was allowed back in the school after suffering from the disease until his throat was certified to be free from diphtheria bacilli. On the other hand a serious outbreak in Middleton-in-Teesdale, where 101 cases were notified, was for the most part confined to school children. Joint action was taken by the district Medical Officer of Health and the County Medical Officer with satisfactory results, as is shown by the following extract from Dr. Neligan's annual report:—"101 cases were notified, 97 in the Middleton and 4 in the South Staindrop sub-districts. Three of the latter cases occurred in one family, and all died. 81 cases were removed from Middleton to the hospital. The first case of this outbreak was detected on the 28th of April, and within four days six other cases developed, all amongst school children. Having obtained the names of those children who had been absent from school suffering from bad throats, I found one family who had all so suffered about a month previously. I swabbed their throats, and one boy was found to be a germ carrier. I also swabbed the throats of several of his class-mates at school, and two of these boys were also found to be germ carriers. No more cases occurred until the 27th May, between that date and the 3rd June 10 cases developed, all with membrane: only four cases with membrane occurred between the 3rd and 30th June. By swabbing contacts, I detected 15 germ carriers during June. During July and August only four cases were detected, all germ carriers. Within a short time after the re-opening of school 10 cases were notified, all with membrane. Being convinced that there must be several germ carriers attending school, I recommended that all the children attending the school should have their throats bacteriologically examined, and Dr. Hill, the school medical officer readily agreed, and made arrangements with the county bacteriologist to send me an outfit to have this done, and also most kindly sent two assistant medical inspectors to help me, and we swabbed the throats of all the children present, over 330. Of the children not present, 24, I afterwards swabbed all but two who were out of the district. That this action was justified was proved by the results, as 24 germ carriers were detected by the

Diphtheria.

Middleton-in-Teesdale epidemic.

Diphtheria.

“ examination. I need scarcely point out that there was no possible
 “ chance of stamping out this outbreak so long as those infected
 “ children were coming into daily contact with others, both in school
 “ and in their homes.

“ On my enquiries at the school, I found, in my opinion, a very
 “ faulty method of seating children in the infant department.
 “ It seems the children have no fixed place in their classes, but are
 “ constantly changing about, so that an infected child might in the
 “ course of a week be in contact with every other child in its class,
 “ and consequently the disease could be spread wholesale. A fixed
 “ position for every child would be helpful in the tracing of contacts.”

**Outbreak in
Houghton R.D.**

In the Houghton-le-Spring Rural District there were also several cases at High and Low Moorsley. Dr. Park refers to this outbreak as follows:—“ The first case of the outbreak was notified on
 “ November 16th, the second on November 28th, the third on
 “ November 29th, the fourth on December 2nd, the fifth on Decem-
 “ ber 5th, and the 6th on December 11th. The most remarkable
 “ thing in connection with the outbreak was the fact that all the
 “ patients were girls attending school. . . . After going care-
 “ fully into the matter I formed the opinion that the infection was
 “ spread by drinking from the taps over the wash-hand basins in
 “ the girls’ lavatory, and probably also by the reprehensible habit
 “ of sharing chewing gum with each other after it had been in the
 “ mouth.”

**Provision of
anti-toxin.**

In a number of districts diphtheria anti-toxin is provided free to the necessitous cases, and it is satisfactory to find that the recent Order—Diphtheria Anti-toxin (outside London) Order, 1910—is receiving favourable attention in other districts so that it is probable that in most districts this valuable curative agent will shortly be available for all necessitous cases.

TYPHUS FEVER.

There was a somewhat serious outbreak (15 cases) of this disease during the third quarter in the County Borough of Gateshead, but fortunately there was no spread of the disease into the Administrative County. I took the precaution of sending, at the earliest possible

moment, a warning notice to every medical officer of health in the county.

ENTERIC FEVER.

It will be seen from the following tables that there was a still further decline both in the prevalence of and deaths from this disease during 1910. These are the most satisfactory figures that have yet been presented for the county, for though in the year 1907 there were rather fewer notifications, the mortality in that year was slightly greater. The unsatisfactory fact remains, however, that the death-rate for the Administrative County (0·09) was nearly double that for England and Wales (0·05). It is satisfactory to note that the mortality rate was not unduly excessive in the rural districts, the same rate obtaining in both urban and rural portions of the county.

Further decrease of prevalence and mortality.

Comparison with England and Wales.

The following table gives particulars of the incidence of, and mortality from, enteric fever during each month of the year, in the Administrative County of Durham:—

Monthly incidence of cases and deaths.

1910.	No. of Cases	No. of Deaths.	Case Mortality per cent.	Death-rate per 1,000 Population per annum.
January	26	7	26·9	0·08
February	29	7	24·1	0·09
March	41	7	17·0	0·08
April	30	8	26·6	0·10
May	45	4	8·8	0·05
June	30	8	26·6	0·10
July	39	6	15·3	0·07
August	31	2	6·4	0·02
September	72	12	16·6	0·15
October	71	10	14·0	0·12
November	39	4	10·2	0·05
December	37	9	24·3	0·11
1910	490	84	17·1	0·09

Enteric fever.
Cases and
deaths
1906-1910.

The next table gives the total number of cases of enteric fever, the total deaths, the case-mortality, and the death-rate during each of the last five years in the Administrative County of Durham :—

Year.			No. of Cases.	No. of Deaths.	Case Mortality per cent.	Death-rate per 1,000 Population.
1906	...	...	1,090	187	17·1	0·22
1907	...	...	449	85	18·9	0·09
1908	...	...	1,048	157	14·9	0·17
1909	...	...	668	106	15·8	0·11
1910	...	...	490	84	17·1	0·09

District incidence.

In no district during 1910 was enteric fever seriously epidemic, though somewhat serious outbreaks occurred at Oakenshaw in the Willington Urban District during May, and at Dunston in the Whickham Urban District in the first quarter. The outbreak at Oakenshaw was attributed to the presence of insanitary ashpit-privies and to the infection of the milk supply, as will be seen from the following account given by Dr. Brown, the Medical Officer of Health :—“ An outbreak occurred at Oakenshaw in the month of April, 26 cases being notified. On being requested by the Local Government Board to make a report as to the cause of the outbreak, I attributed it to the insanitary open privy-middens and the refuse-tip which was very near to the New Row where most of the cases occurred ; the high winds which prevailed at Oakenshaw (which is of considerable altitude and much exposed) in March and April blowing the germ-laden dust about and contaminating the air and food. I am still of the belief that this was a main cause of the epidemic.

Willington U.D outbreak.

L.G.B. enquiry into cause.

“ Dr. Carnwath, however, from the Local Government Board, visited Oakenshaw in July and made a house to house inspection, when he came to the conclusion that there had been other cases which had not been recognised as typhoid, and that in all probability the cause of the outbreak was the milk supply.

“As soon as the cases occurred steps were taken to thoroughly
 “cleanse and disinfect all out-premises and channels and gullies,
 “and to rectify any defect or condition whereby the milk might
 “become contaminated.”

Enteric fever.

Dr. Smith, of Whickham, gives the following account of the outbreak at Dunston:—“Ten of these cases were in the two adjacent
 “Squares, Stokoe and Atkinson Squares, and one only a short distance away and obviously connected with them.

Whickham U.D. outbreak.

“In February when the first cases were notified, I made a
 “thorough investigation into all the circumstances and drew up a
 “report which I communicated to the Council in March. The following is a summary of what was found:—At the end of November
 “of the previous year two cases, a mother and daughter were notified
 “from Atkinson Square and removed to hospital. They returned
 “home on December 23rd, 1909. The next case was notified on
 “February 11th, 1910, from Atkinson Square and sent to hospital,
 “and on February 24th the husband and father of the November
 “cases was notified and sent to hospital where he died, and on the
 “28th another was notified from Stokoe Square and removed.
 “There was intimate connection between this family and the former.
 “Then I noted in my death returns of this date the death of a child
 “of eight months, belonging to the same family certified as due to
 “‘debility, simple diarrhoea and convulsions,’ which under the
 “circumstances seemed to me very suspicious of typhoid infection.
 “It seemed clear then, that we were threatened with, and were having
 “an epidemic of typhoid fever, and the sanitary condition of these
 “Squares was such that there was every facility for its increase.”

Dr. Smith concludes that:—“We cannot do better than take
 “this epidemic as a warning to make every effort to do everything
 “possible to secure cleanliness of surroundings by further promoting
 “paving of streets, back streets, and yards, not trusting only to
 “water supply and drainage and improved closet accommodation
 “and efficient scavenging, important as all these are. . . . At the
 “same time I gave it as my opinion to the Council that the soil in
 “the street was so polluted and had become infected with typhoid
 “bacilli that we could have no feeling of security until that soil was

Enteric fever.

“ removed and the streets properly paved or tar macadamised, and
 “ that we must look forward with apprehension to the summer and
 “ autumn especially if these should prove hot and dry.”

Causes.

Dr. Arthur, of the Easington Rural District reports that “ one
 “ group of five cases was associated with milk supply.” The source
 of infection was removed from the farm concerned and a public
 water supply was laid on and the premises were disinfected, etc.,
 with the result that no further cases arose. Dr. Arthur also states
 that “ three cases were clearly traced to eating mussels.” In the
 Sunderland Rural District, Dr. Stobo calls attention to the persis-
 tence of typhoid in the township of Ryhope, 17 out of a total of 23
 cases notified during the year being from this township. In the
 previous year, likewise, 29 out of a total of 39 cases occurred in the
 same township. The cases occurred throughout the year, in the
 months of April and June alone no notifications being received,
 and this marked incidence in the Ryhope township was the result of
 the infection from cases in the previous year and of the insanitary
 conditions (midden privies, faulty scavenging, etc.) mentioned in
 the report for 1909.

**Highest death-
rates.**

The highest death-rates from enteric fever occurred in Willing-
 ton, Crook, and in the Rural District of Sedgefield.

**L.G.B. Report
on Enteric
Fever in County
Durham.**

During 1910 an important preliminary report on “ Enteric
 Fever in the County of Durham,” prepared by Dr. Wheaton, one
 of their Inspectors, was issued by the Local Government Board, and
 is prefaced by some remarks from the Chief Medical Officer of the
 Board on the facts disclosed. The period dealt with in the report
 refers to the six years 1903-1908, though statistics are included as
 to the death-rate from enteric fever in the County of Durham and
 England and Wales since the year 1871. It is obvious from the
 statistics that during the whole of that period enteric fever has been
 excessively prevalent in the County of Durham. It is also shown
 that during the six years to which the report especially refers, the
 excessive mortality from enteric fever has been largely limited to
 the smaller urban districts and rural districts in the Administrative
 County, the mortality rates for the municipal boroughs being only
 about one-half of that for the rest of the county, and closely approxi-
 mating to the rate for England and Wales.

The facts available as to the probable causes of the excessive prevalence of enteric fever in the County of Durham are reviewed at length, and Dr. Newsholme in his prefatory remarks points out that the most important negative fact which emerges is the failure of evidence to implicate the water supplies of the county in the prevalence of enteric fever during the years 1903-1908, though he indicates that water-borne epidemics have occurred in the county in the past and that the possibility of their recurrence needs to be borne in mind as a practical danger.

**L.G.B. Report
on Enteric
Fever in County
Durham.**

Dr. Newsholme also indicates that the domestic overcrowding which prevails in many parts of the county must increase the spread of enteric fever by personal infection, and that the disease is also not infrequently spread by the consumption of shell-fish and particularly mussels taken from polluted waters; but he thinks the evidence at present available does not favour the conclusion that infection is acquired in the mines of Durham to any great extent, though more exact information is required on this point. The conclusion arrived at in the report is that the chief causes of the excessive prevalence of enteric fever in the county are "the extremely filthy domestic arrangements by which excremental matters are retained in the immediate vicinity of dwellings," and improper scavenging. The following remarks of the Chief Medical Officer of the Board on these particular matters may with advantage be quoted from the report:—"The Board's medical inspectors at various times . . . have not failed to associate this excessive incidence of disease with the unwholesome conditions rife in the county; and the sanitary authorities in the county cannot excuse themselves by the lack of faithful counsel from the medical officer of health of the county and from a considerable number of its district medical officers of health. Knowledge the sanitary authorities have possessed, but this knowledge in many instances has not passed into duty. Ignorance of the facts now set out plainly in Dr. Wheaton's report, when knowledge is obtainable, cannot be regarded as much less culpable than is the failure of other authorities to utilize their knowledge. . . . It is especially among the rural and smaller urban authorities that there has been this double failure to provide for or insist on the execution of continuously efficient scavenging, and to cause the abolition of the worst

“forms of privies. With this gross failure to discharge the most elementary duty of a sanitary authority must be associated the fact that in the large towns (county and municipal boroughs) of the county having an aggregate estimated population for 1905 of 625,693, the total number of cases of enteric fever during the six years 1903-8 was 326, while in the smaller urban districts having an aggregate population of 295,520, the number was 686, and in the rural districts of the county having an aggregate population of 346,324, the number was 649 per 100,000 of population in each instance respectively.”

The smaller incidence of enteric fever in the municipal boroughs of the county is attributed to the fact that midden-privies have been largely abolished and that the scavenging is more efficient.

Reference is made in the report to the relative sanitary value of the ash-closets which have replaced the midden-privies in many parts of the county in the following words:—“Reference has been made to the gradual substitution of so-called ‘ash-closets’ for the old privy-middens. Although this represents some measure of improvement, the change cannot be regarded as altogether satisfactory. It is certain that in all districts in which a considerable number of houses are closely aggregated the change is only intermediate to the provision of water-closets; and experience in other parts of England has shown diminution of enteric fever whenever water-closets have replaced either midden-privies or any form of pail-closet or ‘ash-closet.’ ”

I have not the slightest doubt myself that the adoption of the water-carriage system in the industrial parts of this county would result in an enormous reduction in the mortality from enteric fever and diarrhoeal diseases.

For several years past I have persistently and strongly advocated the adoption of the water-carriage system in the populous parts of this county, and it is satisfactory to find my views so strongly supported by the Chief Medical Officer of the Local Government Board.

The report ought to be carefully studied by all interested in the public health of the county, but it is only fair to point out that high as the enteric fever mortality still is in the county, it has been very markedly reduced since 1893, when reliable statistics were first available, as the following table shows:—

L.G.B. Report
on Enteric
Fever in County
Durham—
criticism of.

	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	18 years' statistics 1893-1910.
Total No. of Cases	2674	1420	1982	1133	831	1486	1429	964	1555	674	550	809	1014	1090	449	1048	668	49	
Total No. of Deaths	447	259	286	187	144	217	226	144	220	115	95	119	158	187	85	157	106	84	
Death-rate per 1,000 population	0·60	0·34	0·37	0·24	0·18	0·27	0·27	0·17	0·26	0·13	0·12	0·14	0·19	0·22	0·10	0·18	0·12	0·09	
AVERAGE DEATH- RATE FOR 4-YEARLY PERIODS, AND FOR LAST 2 YEARS,	0·39				0·22				0·16				0·17				0·10		

Many black spots still exist in the county, and as the report states, many sanitary authorities have failed to fully realize their duties as the guardians of the public health. At the same time, however, very great sanitary improvements have been made in many districts in housing, water-supply, drainage, and excrement disposal, which have been largely responsible for the marked reduction in the total death-rate, enteric fever death-rate, phthisis death-rate, and more recently in the infant death-rate.

The improvement in the general sanitary state of the county is indicated by the fact that the reduction in the total death-rate for the three years 1908-10, as compared with the three years 1893-5, represents the saving of over 7,800 lives.

The following extract from the last section of the report deserves the careful attention of all the medical officers of health in the county, and I hope the recommendations contained therein will be adopted by them:—

“ Among the records which need to be kept by the medical officer of health of each district in the county the following may be mentioned as especially likely to be valuable in the pursuit of further investigations :—

“ 1. Each case when notified requires to be carefully investigated by the medical officer of health, an exact record being kept of his inquiries into the antecedents of each case in such a manner as to be available in any future inquiry into the subject. The record should always give the approximate date of onset of the illness, and the relative dates of cases in the same household.

“ 2. Statistics should be prepared for each sanitary district, setting out the following particulars for each year :—

“ (1) The age and sex incidence of all cases of enteric fever.

“ (2) The occupation of all persons attacked.

“ (3) The number of cases treated at home and in hospitals respectively.

“ 3. For each sanitary district a statement should be prepared giving the method of excrement disposal for each tenement within the district.

“ 4. A statement should be prepared of the numbers of midden-privies converted into ash-privies (so-called ‘ ash-closets ’) and of privies replaced by water-closets in each sanitary district, year by year.

“ 5. Exact information should similarly be recorded as to the method of scavenging employed in each sanitary district, as to whether the work is done by contractors or by the council’s own staff, as to the efficiency of the work, frequency of removal of contents of privies and ashpits, etc.

“ As these conditions are liable to change, the information should be recorded for each individual year.

“ Further information is also needed as to the sources of the shell-fish consumed in the county, as to any special periods of the year for their consumption and their relationships to the incidence of enteric fever.”

CONTINUED FEVER.

The cases of this disease further declined from 24 in 1909 to 19. About half of the total cases were reported from the Easington Rural District. One case occurring in the Lanchester Rural District was fatal. It is probable that the majority of these cases were enteric fever of a mild type, and in the interests of the community the same precautions should be taken to prevent the spread of the disease.

PUERPERAL FEVER.

There were 38 cases notified of this disease, as compared with 32 in the previous year. The deaths from puerperal septic conditions numbered 34 as compared with 32 in 1909. Five deaths occurred in the Auckland Rural District, four in Spennymoor, and three each in Stockton and Felling.

Ten cases, which occurred in the practice of midwives, were the subject of special enquiry by me, the midwives being temporarily suspended from practice and precautionary measures of disinfection adopted.

Midwives and precautionary measures.

ERYSIPELAS.

This disease was slightly less prevalent, 651 cases being notified, as compared with 722 in 1909. The deaths from the disease numbered 20, or one less than in 1909.

MEASLES.

There was a considerable diminution in the number of cases of and in the mortality from this disease, which is rather to be expected, as in the previous year the incidence and mortality had been considerably above the average. The death-rate (0·19) compares favourably with that for England and Wales (0·23). The disease was slightly more fatal in the urban districts with a mortality rate of 0·19 than in the rural districts (0·18).

Reduction in cases and mortality.

Comparison with England and Wales.

In no quarter was the disease unduly prevalent, but the cases became more numerous during the last quarter, when the death-rate increased to 0·29, as compared with 0·12 in the third quarter. The districts most severely affected were Jarrow, Seaham Harbour,

Distribution.

Measles.

Seriousness of measles..

Deaths and death-rates, 1906-1910.

and, to a less extent, Blaydon and portions of the Durham and Easington rural districts. The death-rate from this disease was highest in Jarrow, Seaham Harbour, and Blaydon, and in the rural districts of Durham and Sedgefield. Dr. Dillon, Medical Officer of Health of Seaham Harbour Urban District, remarks that “In a “densely-populated district like ours it is practically impossible to “prevent the spread of this disease, but it is a hopeful sign that “parents no longer look on it as a childish ailment which every “child must necessarily suffer from at some period of its life.”

Referring to the dangers of this disease, Dr. Hunton says:— “An outbreak of this disease, notably in the townships of Ferryhill “and Cornforth, unfortunately resulted in 14 deaths. The usual “age incidence and the liability to severe complications makes this “complaint one of the most dangerous that can attack child life. “It so often leaves behind it chronic ear discharge, permanent lung “trouble, and so forth, thereby rendering many of the youth of our “community physically and permanently unfit, and parents cannot “be too strongly impressed with the importance of securing medical “aid at the earliest possible sign of the illness.”

In the following table the deaths and death-rates from measles for the last five years are given:—

	ADMINISTRATIVE COUNTY.				
	1906.	1907.	1908.	1909.	1910.
Deaths from Measles	138	581	236	324	176
Death-rate from Measles per } 1,000 Population ...	0·16	0·67	0·26	0·36	0·19

WHOOPING COUGH.

This disease was responsible for 224 deaths, equal to a death-rate of 0·24 per 1,000 population, which is the same as the rate obtaining in England and Wales. In the previous year the deaths numbered 217, equal to a death-rate of 0·23 per 1,000 population. The rate in the urban districts (0·26) was slightly higher than in

the rural districts (0·21). There was very little variation in mortality during the four quarters, though the disease was slightly more prevalent during the last quarter. The districts chiefly affected were Jarrow, Ryton, Hebburn, and Chester-le-Street Rural District.

Whooping
cough.

Incidence.

DIARRHŒA.

For the second year in succession, the mortality from this disease was much below the average for the county, though the number of deaths (702) and the mortality rate (0·76) compare unfavourably with those of the previous year, when there were 506 deaths and a mortality rate of 0·56. Comparison with the country as a whole still remains unsatisfactory, the death-rate in the county being more than two and a half times as great. It will be noted that the death-rate from diarrhœa in England and Wales was only 0·30 as compared with 0·28 in the previous year.

Comparison
with England
and Wales.

The deaths from the disease were most numerous during the months of September (195), October (131), and August (110). As in previous years, the mortality was most marked in the rural districts of the county. The disease was fatally prevalent more especially in Blaydon, Chester-le-Street, Southwick, Spennymoor, Willington, and the rural districts of Chester-le-Street, Easington, South Shields, and Sunderland.

Incidence.

Many of the district medical officers of health express the opinion that, given insanitary conditions, and pollution of soil and air about dwellings, the dominating factor in any year in the prevalence of summer diarrhœa is the weather, a hot dry summer always producing a high diarrhœal death-rate. On the other hand, it is fully recognised that if infants receive proper maternal attention, and if the air, food, and soil are kept free from pollution, the annual sacrifice of infant life from diarrhœal diseases would be prevented whatever the climatic conditions. Dr. Taylor, of Chester-le-Street Rural District, for instance says:—"As filth of an animal nature chiefly, and high temperature are the sole arbiters of a high or low death-rate from diarrhœa, this disease must obviously vary with the alterations of its two factors of causation. The present year, though not by any means a warm year, had a higher temperature

“ during August, September, and October than last year, and conse-
 “ quently had an increased number of deaths from diarrhœa. Diarr-
 “ hœa is specially fatal among children, and the younger the child the
 “ greater the fatality. Of the 71 deaths this year 55 or 77·6 per
 “ cent. are of children under one year old, and 69 or 97·18 per cent.
 “ are of children under five years of age.

“ Diarrhœa, being a disease brought about by preventable
 “ causes, should be a disease readily lessened in its fatality. Ob-
 “ viously the lessening of filth must lessen one of the predisposing
 “ factors of the disease. The temperature of the atmosphere one
 “ cannot control, but as the cause of diarrhœa is an organism
 “ requiring heat and filth for its effective propagation, it need not
 “ concern us if one of the factors cannot be controlled, provided the
 “ other can.

“ It should be the duty, or rather the pleasure of all health
 “ authorities to prolong life as long as possible, for the prosperity
 “ of a community depends on the life and health of the units of that
 “ community.”

INFECTIOUS DISEASE (NOTIFICATION) ACT.

There was a decrease in the number of notified cases of infect-
 ous disease as compared with 1909, when 6,337 cases were notified,
 a diminution occurring in the case of scarlet fever, enteric fever,
 and erysipelas, but there was a further slight increase in the num-
 ber of cases of diphtheria.

INFECTIOUS DISEASE (NOTIFICATION) ACT.

Statement of notifiable diseases reported during each month of 1910.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
Small-Pox ...	1	...	...	...	...	2	...	...	...	1	...	...	4
Scarlet Fever ...	403	406	391	324	275	251	252	196	251	211	235	224	3419
Diphtheria ...	111	103	85	97	108	136	89	74	126	98	92	108	1227
Membranous Croup ...	8	...	5	6	2	1	1	1	1	...	2	4	31
Typhus Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric or Typhoid Fever..	26	29	41	30	45	30	39	31	72	71	39	37	490
Relapsing Fever ...	..	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever ..	...	7	3	...	...	1	...	...	...	3	1	4	19
Puerperal Fever ...	1	3	3	2	4	4	...	5	3	3	1	9	38
Cholera ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas ...	48	64	65	62	44	30	56	49	53	57	53	70	651
TOTALS ...	598	612	593	521	478	455	437	356	506	444	423	456	5879

ISOLATION HOSPITALS.

Districts with-
out hospitals.

Inadequate
accommodation.

During 1910 the Stanhope Urban District and the Weardale Rural District were still without any means of isolating ordinary cases of infectious disease, but it is hoped that the erection of a hospital will shortly be completed. Hospital accommodation will then be available in every district in the county, though in some districts, owing especially to increase in population since the erection of the hospitals, the accommodation is not adequate. This is notably the case in Durham, Hartlepool, Brandon, Chester-le-Street, Seaham Harbour, and in the rural districts of Durham and Houghton. The hospital of the Hartlepool Port Sanitary Authority is still used for the reception of patients from the County Borough of West Hartlepool and from the Borough and Rural District of Hartlepool, although the accommodation is inadequate. As was mentioned in my previous report, it was understood that when the West Hartlepool Corporation applied for the constitution of their town as a county borough they would provide themselves with proper hospital accommodation.

Additional
accommodation
recommended.

The Medical Officer of Health of the Chester-le-Street Urban District again recommends the formation of a joint hospital board or committee for the union. Additional hospital accommodation is recommended by the medical officers of health for Jarrow and the rural districts of South Shields and Sunderland where blocks for the treatment of cases of diphtheria are required, and also by the medical officers of health of Brandon and Byshottles and the rural districts of Chester-le-Street, Houghton-le-Spring, and Barnard Castle, where the present accommodation is inadequate. Extensions are reported to the hospitals in Darlington and Barnard Castle. Steam disinfectors are required in Durham and in the rural district of Easington.

Steam
disinfectors.

SMALLPOX HOSPITALS.

During the year a Provisional Order was issued by the Local Government Board containing the necessary provisions for giving effect to the proposals for uniting the County Borough of South Shields with the North East Durham Joint Small-pox Hospital Board's district and transferring the existing smallpox hospital of the South Shields Corporation to the enlarged Board.

Similarly the Committee of the Durham and Brandon Joint Hospital District has been reconstituted so as to include Durham City, and a new hospital for this joint district is now in course of erection.

Smallpox
hospitals.

Accommodation for the isolation of smallpox cases is required for Chester-le-Street and for the Urban and Rural Districts of Barnard Castle.

PHTHISIS AND TUBERCULOSIS.

There was a still further slight decline in the death-rate from phthisis, which is the lowest yet recorded. The disease caused 767 deaths, as compared with 780 in the previous year, and this is equal to a death-rate of 0·83, as compared with 0·86 in 1909, and of 1·08 for England and Wales for the same year.

Lowest
recorded death-
rate.

It is satisfactory to record also a decrease in the mortality from other forms of tuberculosis, there being 564 deaths as compared with 625 in the previous year, and a fall in the death-rate from 0·69 to 0·61. Altogether during the year there were 1,331 deaths from all forms of tuberculosis, and the total tuberculosis death-rate was 1·45, as compared with 1·56 in the previous year.

During the year a considerable number of cases of phthisis were notified to sanitary authorities in the county under the Public Health (Tuberculosis) Regulations 1908 Order.

Notifications
under L.G.B.
Order, 1908.

A voluntary system of notification has been in operation in Jarrow and Hebburn for some years, and recently the same procedure has been adopted in the Chester-le-Street Rural District. Several of the district medical officers of health recommend the compulsory notification of this disease, but, as is pointed out in many of the reports, a necessary corollary to notification is the provision of treatment, and this course is generally advocated by the writers. In a few instances (Jarrow, Hebburn, and Easington Rural District), the local authorities have taken advantage of the facilities provided by the Durham Society for the Prevention of Consumption, who have a sanatorium for men at Stanhope and one for women at Wolsingham. Also, as in previous years, the

Voluntary
notification.

Sanatoria
arrangements.

Phth sis, &c.

smallpox hospital of the Chester-le-Street Rural District, near Birtley, and also that of the Lanchester Joint Smallpox Hospital Board, at Maiden Law, were utilised as sanatoria.

Conference as to
suggested
County Council
Sanatorium.

During the year the question of the provision of a sanatorium by the County Council received further consideration, and in March, 1911, representatives of the various sanitary authorities in the county were invited to discuss the matter. The meeting terminated, however, without the expression of a definite opinion on the proposals, a very small majority of those present voting against the provision of a county sanatorium, but the sanitary authorities were not proportionately represented, and a large number of delegates had left the meeting before a vote was taken. It is to be hoped that a further conference will be held at an early date.

Prevention and
cure of
consumption.

There is a danger I fear that the question as to the means to be adopted for stamping out consumption may become a subject of violent controversy throughout the country. This is unfortunate as it must be obvious to all who take a dispassionate view that no single one of the methods at present advocated can be entirely successful under present conditions.

Taking first of all the preventive measures—unquestionably the most important is improvements to the housing. I think it is no exaggeration to say that were every house adequately lighted and ventilated, and overcrowding diminished we should only have a fraction of the cases of consumption that at present occur. Next in importance is the education of the classes chiefly affected on such questions as personal hygiene, feeding and rational amusements. These matters are intimately associated with housing. Cleanliness is at present almost impossible to obtain in many houses owing to faulty construction or bad environment. Rational amusement is impossible for many children, there being wholly inadequate open spaces and playing grounds in our most congested areas. Next there are methods directed against the spread of infection, and undoubtedly the most rational of these is to cure the patient if possible. This can be done in a certain proportion of cases, and the proportion of cured will become higher each year as more and more

early cases are brought under treatment. In these early cases I believe that the use of tuberculin will be highly beneficial, but if permanent cures are to be effected, I am convinced that a larger number of cases will have to be temporarily removed from their present environment. A man may be cured to-day but he is almost certain to have a relapse to-morrow if he reverts to the conditions of living under which he contracted the disease in the first instance. This as it seems to me is the crux of the whole question, and once more we are brought face to face with the housing problem, with the present ignorance of personal hygiene and with faulty domestic economy.

Prevention and
cure of
consumption.

After these considerations, I may once more express my belief in the utility of sanatoria. The precise mode of treatment adopted in these institutions may be safely left to the specialists in charge to decide. But undoubtedly only by treatment in some such institution can proper rest and feeding and personal hygiene be enforced in many cases, whilst it may be assumed, I think, that the education given on these matters will be of permanent value to many on their discharge. To get full value for the treatment, the patient should of course be put into good surroundings on his discharge, but this I fear is a counsel of perfection which at the present time is difficult to carry out in many instances. By the provision of shelters, to enable the open-air treatment to be continued where the home environment is unsatisfactory, and by kindly help and supervision much can undoubtedly be done in this direction.

The evils of consumption and the methods for dealing with the disease are ably set forth by the Medical Officer of Health for Stockton Borough in the following words:—"The economic loss
"for which the disease may reasonably be held accountable is
"therefore indisputable. The amount of suffering attributable,
"directly or indirectly to consumption, is simply appalling. Con-
"sumption is a malady which possesses features peculiarly its own.
"Its onset is often insidious in a marked degree, indeed, except to
"the eye of the trained expert observer, the early symptoms more
"frequently than not are liable to be interpreted as the expression

Prevention and
cure of
consumption.

“ of some merely passing functional derangement, such for instance
 “ as dyspepsia, accompanied by loss of appetite, or it may be a
 “ simple catarrh. Often it is only by the persistent and relentless
 “ progress of the disease, once it has gained foothold, that the
 “ seriousness of the outlook is proclaimed. Generally by this time
 “ the vital energy of the sufferer is so sapped that he is incapacit-
 “ ated. Men who have, it may be, just reached proficiency in their
 “ calling, or women who have, perhaps, just assumed the duties of
 “ wifedom or motherhood fall victims to the disease and find
 “ themselves a drag instead of a help in the domestic circle. The
 “ bread winner gradually but surely loses his earning potentiality
 “ —one by one his resources are undermined—his earnings cease,
 “ his insurance, if any, lapses—and at last he becomes penniless
 “ and in want.

“ Naturally those dependent upon his earnings or his thrift
 “ quickly suffer and in consequence acquire a state of receptivity
 “ distinctly favourable to the organisms which cause the disease
 “ and are therefore extremely prone to be attacked by consumption
 “ themselves.

“ Tragedies somewhat varying in their setting it may be, but
 “ in no wise less sad than what these words portray, are common
 “ in our midst. Surely then no effort to diminish the prevalence
 “ of so veritable a plague should be spared!

“ In several previous reports I have reviewed at some length
 “ the various measures which are practicable to this end; it is
 “ therefore unnecessary to labour the subject here. I think it
 “ however desirable to point out that in any consideration as to
 “ what measures are available it soon becomes obvious that the
 “ starting point of any crusade likely to be successful, must be a
 “ knowledge of the existence of all the cases of the disease. An
 “ estimate of the relative proportion of cases of consumption to the
 “ deaths it causes that is accepted generally as very moderate, is
 “ five to one, so that, there would be approximately 350 cases of
 “ consumption in your district during last year.

“ At present not a tithe of the cases come to the knowledge of
 “ the sanitary authority and the experience of other places where
 “ various systems of voluntary notification have been tried shows
 “ pretty conclusively, I think, that only by compulsory notification
 “ can this information in practice be obtained. It seems clear
 “ then, that compulsory notification of consumption is essential. . .

Prevention and
 cure of
 consumption.

“ The sanatorium treatment of the disease both from the view
 “ of possible cure of cases in an early stage, the segregation of
 “ cases in advanced stages, and as a prophylactic measure has for
 “ several years now been admitted to be of very great utility.”

Dr. Horne concludes with this reference: “ Dr. Wilkinson has
 “ been using tuberculin in the diagnosis and treatment of cases of
 “ consumption for many years, and he has published his experience
 “ in a work entitled ‘ Treatment of Consumption.’ Anyone who
 “ reads this fascinating volume cannot fail to be profoundly im-
 “ pressed by its contents. Its pages seem to echo unimpeachable
 “ evidence of the great value of tuberculin as a treatment. One
 “ is almost compelled to admit to the conviction that at last a
 “ specific remedy for consumption is available. Caution, however,
 “ as experience teaches, is necessary before accepting too implicitly
 “ the views of enthusiasts, and without direct evidence obtained
 “ first hand I do not feel justified in advocating the establishment of
 “ a Tuberculin Dispensary.”

ACUTE LUNG DISEASES.

There was a slight decrease in the deaths from bronchitis, pneu-
 monia, and pleurisy, 2,012 deaths occurring as compared with
 2,042 deaths in 1909, the death-rate being 2·27. A large proportion
 of the deaths from lung diseases occurred among our infant popu-
 lation, 623, equal to 30·9 per cent. of the total deaths occurring
 amongst children under one year of age and, as has often been
 pointed out by the district medical officers of health, many of such
 deaths are preventable by reasonable care and attention on the part
 of parents.

MALIGNANT DISEASES.

There was a further increase in the mortality from cancer and the several forms of malignant disease, there being 636 deaths and a death-rate of 0·69 as compared with 555 deaths and a death-rate of 0·64 in the previous year.

BACTERIOLOGICAL EXAMINATIONS.

The following table gives particulars of the specimens sent by medical practitioners in the Administrative County for examination during 1910, in accordance with the arrangement made between the County Council and the Durham College of Medicine: —

	Number of Specimens submitted.	RESULTS.		
		Positive.	Negative.	Inconclusive
Diphtheria	1,375*	434	900	39
Enteric Fever	168	73	95	—
Tuberculosis (Phthisis, &c.)..	475	152	323	—
Ankylostomiasis	2	—	2	—
Totals	2,020	659	1,320	39

* 2 swabs contaminated.

There was a considerable increase in the number of specimens submitted for examination, 2,020 being reported as compared with 1,086 in the previous year. The chief increase occurred in the number of specimens sent from suspected cases of diphtheria, this being largely due to the inclusion of a large number of specimens taken from school children. The proportion of positive results was 32·6 per cent., as compared with 44·1 per cent in 1909 and 40·8 in 1908. In several of the health reports there is an appreciatory reference to the arrangement made by the County Council with the Durham College of Medicine for the bacteriological examination of specimens sent by medical practitioners in the county without charge to the patient, where the latter is unable to afford the expense.

Greatly
increased
number of
examinations.

WATER SUPPLY.

A considerable portion of the county is plentifully supplied with soft water of good quality, the upland gathering grounds being free from any serious pollution.

The east and north-east parts of the county are largely supplied with water from deep wells sunk in the magnesian limestone, and as some doubt has been raised as to the purity of certain of these supplies (a matter which has been referred to in my previous reports) arrangements were made with the Sunderland and South Shields Water Co., after a conference between myself and the Company, by which the County Bacteriologist was enabled to take samples from the different pumping stations of the Company. These samples were taken towards the end of the year, and though none of them contained typical organisms of the coli type, further investigations appear to be desirable, and joint action by the County Council and the Corporations of Sunderland and South Shields will probably be taken. Every assistance has been given by the Water Company who are themselves satisfied that at its source the water pumped by them is pure and wholesome. It is highly probable that the water in some of the reservoirs has been at times liable to pollution by town and other refuse deposited on land in their neighbourhood, and further enquiry into this matter is also necessary.

Sunderland and South Shields Water Company's supply.

The towns of Darlington and Bishop Auckland, and to some extent Stockton and the adjoining districts obtain their water supply from rivers which are not free from sewage pollution above their intake and such supplies cannot, therefore, be regarded as free from danger even though the best practical means may be taken to purify the water by storage and filtration.

Danger of river supplies

In the Chester-le-Street and Durham rural districts it is mentioned that there are several small communities still inadequately supplied with water, and a few outlying farms in other districts also require attention.

Inadequate supplies.

Some further progress appears to have been made with the work of laying water into houses or into the yard attached, and the disadvantages of the supply being limited to a stand-pipe in the back street are now becoming generally recognised.

Improved supplies.

HOUSING OF THE WORKING CLASSES.

A considerable amount of information on this important subject is to be found in the abstracts of the annual reports which are given at the end of this report. In certain of the reports, however, the information given under this heading is somewhat scanty and lacking in detail, which is much to be regretted in view of the fact that an annual report is a valuable medium for recording the progress that is made in a district apart from the fact that the information is useful to the Local Government Board and the County Council. The Housing (Inspection of District) Regulations, 1910, require the medical officer of health in future to give certain information regarding insanitary property in a definite form, and no doubt this will tend to greater uniformity. These regulations were issued late in the year and in consequence it was not found practicable in many districts to commence the systematic inspection of the housing, though in a number of the reports it is mentioned that preparations are being made for an early start on this work.

Housing
(Inspection of
District)
Regulations,
1910.

Houses erected
and occupied
during year.

Overcrowding.

Provision of
workmen's
dwellings by
local
authorities.

County
Council's
Usworth
Housing
Scheme.

From the table on page 50 it will be seen that there has been a slight decrease in the number of new houses erected and occupied. This is unfortunate, as undoubtedly the chief need in many districts is additional accommodation. As was mentioned in my last report very serious overcrowding exists in certain districts and this reacts on the housing, making it extremely difficult to close insanitary property, either because it would only increase the overcrowding in other dwellings or else lead to loss of employment to the persons displaced.

Several authorities, I am glad to report, are seriously considering the advisability of providing workmen's dwellings under Part III. of the Housing of the Working Classes Act, 1890, and I am convinced that this is the right remedy for the present condition of affairs.

The erection by the County Council of 50 houses at Usworth (the first part of the scheme for the erection of 100 houses) was completed and the houses were all in occupation before the end of the second quarter of the year.

Attached are the block plan and plans of the two types of dwellings which have so far been erected; and the following statement of receipts and expenditure in connection with the scheme, which has been submitted by the County Accountant, for the period from 29th May, 1910, (on which date the houses were opened) to 31st March, 1911, gives some interesting particulars.

USWORTH HOUSING SCHEME.

INCOME AND EXPENDITURE from 29th May, 1910, to 31st March, 1911.

Rents of 50 Houses @ 5/8 and 6/8 per week	£	s.	d.
	686	15	3
CAPITAL COST.			
Land	£	s.	d.
	875	0	0
Law Charges	18	12	6
Erection of 50 Houses...	9515	11	9
Street Making	769	3	4
Architects	450	15	10
Clerk of Works	67	3	3
	<hr/>		
	£11,696	6	8
<hr/>			
	£686	15	3

Interest on Loan	£	s.	d.
	334	2	6
Sinking Fund	72	15	0
	<hr/>		
	406	17	6
Rates	114	3	3
Water Rate	50	6	5
Collector's Salary, &c.	19	1	2
Insurance	5	0	7
Property Tax	24	14	7
	<hr/>		
	620	3	6
<hr/>			
Balance reserved for Repairs, &c.	66	11	9
	<hr/>		
	£686	15	3
	<hr/>		

The rents at which the houses are let are considerably less than those paid for similar houses in the district of less satisfactory construction and with less favourable surroundings. It is interesting to note that not a single week's rent for any of the houses was lost up to the 31st March last. The whole of the streets, front and back, are imperviously paved with tar asphalt, and the yards of the dwellings themselves are laid in cement concrete, as is also the portion of the site covered by the houses.

The sum originally borrowed from the Local Government Board in connection with the scheme was £11,960, which includes land to the value of £875 which has not yet been utilised. The total expenditure on the scheme so far has exceeded by £630 the estimated cost, but this sum includes all the preliminary expenses incidental to such a scheme which ought not to be included in considering whether the scheme is self-supporting or not. It will be noted from the foregoing statement that up to the 31st March last there was a balance of income over expenditure of £66 11s. 9d., or nearly 10 per cent. of the income, which is allocated for repairs. Practically during that period the cost for repairs was nil.

There has been a great demand for the houses which in construction and surroundings compare very favourably with any others in the district, and it is to be hoped that the whole scheme will shortly be completed, as the demand for houses in the neighbourhood is by no means satisfied. The tenants generally are very pleased with the dwellings and the only serious complaint which has been brought to my notice is that the sharp angles on the stairs of the smaller dwellings render it very difficult to get larger articles of furniture to the upper rooms. This objection should undoubtedly be remedied in the other houses to be erected. It is interesting to note that the demand for the smaller type of house is very much greater than that for the larger dwellings, though for the rent paid the accommodation in the latter is, in my opinion, much superior.

No difficulty is being experienced in connection with the water-closets attached to the houses, and this confirms the view I have always held that, given a little supervision by the landlord or sanitary inspector in the first instance, water-closets provided for miners' dwellings would not be misused.

The success of this Usworth Housing scheme should encourage other local authorities in the county, in whose districts there is a great scarcity of dwellings for the working classes and serious overcrowding, to themselves put in force Part III. of the Housing of the Working Classes Act, 1890, where private enterprise is not satisfactorily coping with the difficulty.

County
Council's
Usworth
Housing
Scheme.

The accommodation in the Chester-le-Street Rural District, however, still remains most inadequate in certain townships, but it is reported by the Medical Officer of Health that the Rural District Council are proposing to erect 21 three-roomed houses and a like number of five-roomed houses in Washington township, and there is also the further prospect of the District Council undertaking the completion of the County Council scheme at Usworth, which involves the erection of another 50 houses.

Chester-le-
street R.D.C.'s
Washington
Scheme.

R.D.C. and
Usworth
Scheme.

As a rule no description is given in the reports of the district medical officers of health of the new dwellings erected in their districts and it may be inferred that the usual types, viz., two-, three-, or four-roomed cottages erected in rows divided by front and back streets, was not departed from in most cases. The better class houses are provided with a wash-house in the yard, but it is still unusual to find bathrooms attached or even the provision of a bath in the scullery. In a few districts the "Avenue System," under which the front street is dispensed with (the space being utilised for gardens) appears to be gaining favour.

Types of new
dwellings
erected.

The attention of the County Council was called during 1910 to the erection of a large number of two- and three-roomed tenement dwellings of an objectionable type near Boldon Colliery, in the South Shields Rural District, and in some respects the houses do not comply with the building bye-laws in force in the district. The accommodation provided in these tenements is quite inadequate for the family of a working man. The means of ventilation of some of the rooms is seriously inadequate, and no provision was made for providing deafening to the floors between the upper and lower tenements, with the result that the occupants of the lower rooms are frequently disturbed by noises in the upper flats.

Unsatisfactory
tenements
erected at
Boldon Colliery.

County
Council's
action re Boldon
Colliery
tenements

The attention of the Local Government Board was specially drawn to the objectionable character of these dwellings, and the following resolutions of the County Health Committee with respect to them were also forwarded to the Board:—

“(1) That this Committee deeply regrets that it should be
“ possible for houses of this description, which vio-
“ late important principles of town planning and
“ healthy house construction, to be erected in the
“ county, and that the County Council should have
“ no power of control directly or indirectly over
“ the erection of such houses.

“(2) That this Committee is strongly of opinion that
“ County Councils should have statutory powers
“ to prevent the erection of such houses in their
“ administrative area, and also to compel district
“ sanitary authorities to carry out their own bye-
“ laws, and

“(3) That the Board be respectfully urged to promote
“ legislation with this object and in the meantime
“ to take immediate steps to prevent the further
“ erection of such houses.”

Representative
to L.G.B. on
Benfieldside,
U.D.

A representation was made by the County Council to the Local Government Board, under Section 10 of the Housing, Town Planning, &c., Act, 1909, with respect to a number of insanitary houses in the Benfieldside Urban District, a difference of opinion existing between the County Council and the District Council as to the alterations necessary to make the houses habitable. At the end of the year the matter was under consideration.

Sanitary survey
of urban
districts of
Asst. C.M.O.

During the year the Assistant County Medical Officer continued his sanitary survey of the urban districts and submitted reports to the County Council on Blaydon, Brandon and Byshottles, Consett and Crook. In these reports detailed reference is made to the housing which is evidently very inadequate in certain parts of the first-named districts and unsatisfactory in other respects in the other two districts.

The County Council during 1910 exercised its statutory powers under Section 45 (2) of the Housing of the Working Classes Act, 1890, with respect to 170 houses situated at Washington (18) in the Chester-le-Street Rural District, at Coxhoe, Long Row (16) in the Durham Rural District, at Murton Colliery (20) in the Easington Rural District, at Middle Rainton (12) in the Houghton-le-Spring Rural District, at Trimdon Colliery (69) in the Sedgefield Rural District, and at Ryhope Colliery (35) in the Sunderland Rural District, and owing to default by the Rural District Councils proceedings for closing orders were commenced against the owners of insanitary dwellings in respect of 168 houses, of which 154 were situated at Haswell Colliery in the Easington Rural District and 14 at Usworth in the Chester-le-Street Rural District.

County
Council's
action
respecting
unhealthy
dwellings.

To the older part of the housing it will be seen from the reports that a considerable amount of improvement was effected during the year. The steady decrease in the death-rate is a reliable index of the value of this work. In most districts however there remains a lot undone and the old type of cottage with low attics and insanitary surroundings is still very common in many parts of the county.

The following table, compiled from information kindly supplied by the district Surveyors and Inspectors, gives the number and distribution of houses erected and occupied in the Administrative County during 1910. In the previous year 4,143 houses were erected, and 3,896 occupied, so that there is a slight decrease in the number of new houses erected and occupied during the past year:—

New houses
erected and
occupied during
1910.

New houses
erected and
occupied during
1910.

District.	Number of New Houses Erected.	Number of New Houses Occupied.	Housing of the Working Classes Acts.		
			Number of Dwellings Dealt with.	Number of Dwellings made Habitable	Number of Dwellings Perma- nently Closed.
URBAN.					
Darlington Borough	356	356	...	...	...
Durham ".....	27	27	13	7	6
Hartlepool ".....	1	1	22	...	22
Jarrow ".....	12	10	40	...	...
Stockton ".....	145	97	3	...	2
Annfield Plain	197	197	93	6	22
Barnard Castle	6	5	41	...	...
Benfieldside	21	21	...	...	...
Bishop Auckland	109	87	...	...	...
Blaydon	121	121	28	19	9
Brandon and Byshottles	56	54	33	32	1
Chester-le-Street	130	128	64	54	4
Consett	92	77	20	20	...
Crook	55	55	...	...	...
Felling	60	60	54	14	24
Hebburn	10	3	32	2	30
Hetton-le-Hole	103	103	...	...	...
Houghton-le-Spring	19	17	...	...	...
Leadgate	18	18	7	1	...
Ryton	168	120	2	...	2
Seaham Harbour	100	17	1	...	1
Sildon	10	10	..	...	...
Southwick-on-Wear	6	1	20	...	4
Spennymoor	29	29	...	...	...
Stanhope	2	2	...	...	...
Stanley	311	311	40	...	34
Tanfield	60	60	7	4	3
Tow Law	2	..	...	...	...
Whickham	106	87	...	...	..
Willington	15	15	142	8	...
RURAL.					
Auckland	144	144	28	6	...
Barnard Castle	34	34	38	3	1
Chester-le-Street	326	326	437	291	102
Darlington	12	12	15	12	3
Durham	113	113	306	67	97
Easington	290	290	220	71	28
Hartlepool	29	22	1	...	1
Houghton	132	126	...	...	...
Lanchester	114	114	7	1	6
Sedgefield	142	142	...	...	...
South Shields	310	96	15	13	2
Stockton	26	26	...	...	...
Sunderland	28	19	...	...	...
Weardale	7	3	2	2	...
Administrative County..	4,054	3,556	1,731	633	404

HOUSE DRAINAGE, SEWERAGE AND SEWAGE DISPOSAL.

Throughout the county generally, where covered drains and sewers have been constructed, the house drain connections are generally well trapped, and in only a small proportion of dwellings in the county are there any drain connections or sinks within the dwelling, the gully traps communicating with the drains and sewers being either placed in the back street or in the back yard.

Trapping of
house drains.

There are still a large number of open channels in some of the mining villages of the county which constitute the only provision made for carrying the sewage and slop waters from the individual houses. These channels frequently have pervious joints and are otherwise defective and, as I have previously pointed out, are a serious nuisance and cause of ill-health.

Open channels.

In this respect, however, I am glad to report that considerable improvements continue to be made and are contemplated in several districts, and in a few years I trust the open channel system of drainage will cease to exist in this county.

During October an Enquiry was held by Mr. A. E. Sandford Fawcett, an Inspector of the Local Government Board, into the County Council's complaint under Section 299 of the Public Health Act, 1875, that the Rural District Council of Durham had made default in providing the village of East Hetton with sufficient sewers and in maintaining existing sewers. The Local Government Board was satisfied that the Rural District Council had made default and requested that an efficient scheme for the sewerage of the village should be submitted to them within three months.

East Hetton
sewerage—
County
Council's
complaint.

The following table indicates the action which has been taken by the County Council, and the progress made by the district authorities towards preventing pollution of water-courses in the county. A list of places is also given where sewage disposal works are still needed for the prevention of pollution of important water-courses.

County
Council's
action during
1910.

Sewerage
and
sewage
disposal.
Statutory
notices
served.

A STATEMENT OF STATUTORY NOTICES SERVED DURING 1910, AND RESULTS.

Defendants.	Place.	Stream Polluted.	Date of Notice.	Result of Notice without Legal Proceedings.
Chester-le-Street R.D.C.	Witton Gilbert	River Browney ..	18/5/10	A site for new works has been selected, and application has been made to lease same.
Chester-le-Street U.D.C.	Chester-le-Street	River Wear	5/8/10	A Scheme for under-draining the sewage land has been approved.
Do.	Pelton Fell Colliery ...	Stanley Burn	5/8/10	The District Council are awaiting their Surveyor's report on this matter.
Spennymoor U.D.C.	Spennymoor U.D.	Tudhoe Wood, Nicky Nack, & East Howle Becks.	15/11/10	Arbitration proceedings to acquire land to be proceeded with without further delay.
Willington U.D.C.	Willington	Willington Burn & River Wear.	29/7/10	Works are in hand to remove the pollution from the Willington Burn.

There were no County Court proceedings during 1910.

SEWAGE DISPOSAL WORKS PROVIDED DURING 1910:—

New sewage disposal works.

Durham Rural District.—Bearpark.*Durham Urban District.*—Durham.*Stanhope Urban District.*—Stanhope.EXTENSIONS TO SEWAGE DISPOSAL WORKS COMPLETED
DURING 1910:—

Extensions to sewage works.

Sedgefield Rural District.—Ferryhill (North Side).*Annfield Plain Urban District.*—Kyo and Dipton.LIST OF PLACES WHERE THE DISTRICT COUNCIL AT THE END OF 1910
HAD UNDERTAKEN TO PROVIDE WORKS:—

Works to be provided.

Auckland Rural District.—Witton Park; West Auckland, &c.; Byers Green; Tod Hills; Hunwick; Sunnybrow.*Chester-le-Street Rural District.*—Ouston Colliery; Perkinsville, &c.; Pelton Village; Pelton Fell Colliery; Witton Gilbert.*Darlington Rural District.*—Whessoe.*Easington Rural District.*—South Hetton Colliery, &c. (trunk sewer to the sea).*Bishop Auckland Urban District.*—Bishop Auckland.*Blaydon Urban District.*—Blackhall Mill and Chopwell Colliery; Rowlands Gill; Barlow Village.*Spennymoor Urban District.*—Spennymoor (whole district).*Tow Law Urban District.*—Tow Law.*Whickham Urban District.*—Marley Hill and Byer Moor.*Willington Urban District.*—Page Bank.

Polluting
districts.

OTHER POLLUTIONS STILL REQUIRING ATTENTION:—

RIVER GAUNLESS AND TRIBUTARIES.

Auckland Rural District.—Butterknowle; Copley Bent; Low Evenwood; The Oaks and a portion of Evenwood.

RIVER SKERNE AND TRIBUTARIES.

Darlington Rural District.—Aycliffe.

RIVER BROWNEY AND TRIBUTARIES.

Lanchester Rural District.—Lanchester; Ushaw Colliery; Hamsteels Colliery and Railway Terrace.

Crook Urban District.—Peases' West, Stanley.

RIVER WEAR AND TRIBUTARIES.

Auckland Rural District.—Binchester Blocks; Gommer Terrace, Toronto.

Chester-le-Street Rural District.—Plawsworth; Plawsworth Bar; Nettlesworth, &c.

Durham Rural District.—East Hetton; California; Coxhoe; Kimblesworth.

Weardale Rural District.—Daddry Shield; Eastgate; West end of Westgate, &c.

RIVER TEAM AND TRIBUTARIES.

Chester-le-Street Rural District.—Urpeth, Pelaw Grange and Brown's Buildings; Bewicke Main Colliery; Kibblesworth; Beamish.

Unsatisfactory
sewage works.

SEWAGE DISPOSAL WORKS FOUND TO BE INADEQUATE OR FREQUENTLY
UNSATISFACTORY DURING 1910.

Auckland Rural District.—Challies Row, Newfield; Etherley Dene.

Chester-le-Street Rural District.—Alma Pit; Birtley; New Lambton. Unsatisfactory sewage works.

Easington Rural District.—Deaf Hill and Trimdon Foundry; Shotton Colliery; Murton Colliery; Thornley Colliery.

Houghton-le-Spring Rural District.—William Henry Pit, Fence Houses.

Lanchester Rural District.—Craghead; Esh Winning; Derwent Cottages; Malton Colliery.

Sedgefield Rural District.—Bishop Middleham; Ferryhill (North Side).

Stockton Rural District.—Stillington Iron Works.

Benfieldside Urban District.—Shotley Bridge.

Blaydon Urban District.—High Spen (Spen Burn Works).

Brandon and Byshottles Urban District.—Lymington Terrace.

Chester-le-Street Urban District.—Chester-le-Street Sewage Farm.

Spennymoor Urban District.—Ox Close, Spennymoor.

Stanley Urban District.—South Moor.

Tanfield Urban District.—Tantobie and White-le-Head.

Tow Law Urban District.—Tow Law.

Willington Urban District.—Willington.

BRIEF DESCRIPTION OF SEWAGE DISPOSAL WORKS.

The following is a brief description, with observations, of the sewage purification works which are in operation in this county. The works are inspected at least once a quarter by the County

Health Inspector in order to see that not only a satisfactory effluent is produced, but also that as far as possible the works themselves are kept free from nuisance.

It is gratifying to note that some of the works are very neatly kept and are object lessons of what can be done in the way of dealing with filthy matter without the works and their surroundings becoming objectionable. On the other hand, there are works under the control of surveyors and attendants whose ideals in this direction are apparently not of a very high order, and consequently their state is frequently unsatisfactory.

AUCKLAND RURAL DISTRICT.

Middlestone Moor and South Church.—Settling tanks, a double series of contact beds operated by automatic gear, slate being used at the first-named place in the primary beds, and storm water filter. Effluents not always good owing to the period of contact being the same for strong and weak sewage.

Evenwood.—The same as above, but without slate beds and automatic gear and storm water filter. Effluent usually good.

Coundon.—Settling tanks, primary contact beds operated by automatic gear, and secondary percolating beds upon which the sewage is spread by means of sprays and revolving spreaders. There is also a storm water filter. Effluents usually excellent.

Witton-le-Wear and Escomb.—Settling tanks and land. There is usually no effluent from either of these places.

Leasingthorne.—Settling tanks, a single series of percolating filters with revolving spreaders and a storm water filter. Results usually fairly satisfactory.

Helmington Row.—Settling tanks and a percolating filter fed from trays. Character of effluent varies considerably.

Etherley Dene.—Settling tanks and one series of two percolating filters of breeze and sand fed by sprays. Works too small. Effluents often unsatisfactory.

Riseburn Village.—Settling tank and breeze filter. Works simply a makeshift for a decaying district.

Brief
description of
sewage disposal
works.

Newfield.—There are three small installations for this place. At Whinney Bank there are tanks and land which are not always used to the best advantage. At Bridge Row there are tanks and a small area of gravelly land. These works are simply a makeshift. At Challies Row there is a small installation of double contact beds, the effluent from which is not always satisfactory. The latter two works are provided and controlled by the colliery owners.

Seldom Seen.—Settling tanks with pipes laid radiating in a gravelly subsoil with satisfactory results.

BARNARD CASTLE RURAL DISTRICT.

Egglestone.—Settling tanks from which sewage is run into trenches cut in gravelly subsoil. Very primitive but satisfactory.

Gainford.—Settling tanks and land. Very satisfactory.

Middleton-in-Teesdale.—Covered tanks. Percolating filter fed by trays and land. Not at all times as satisfactory as could be desired.

Staindrop.—Settling tanks and irrigation in trenches cut in plantation. No effluent from these works.

Whorlton.—Settling tank, small sand and gravel filter, and a small area of garden land. Capable of being improved.

Winston.—Small tank, effluent from which loses itself in plantation. Very primitive but satisfactory.

CHESTER-LE-STREET RURAL DISTRICT.

Alma Pit.—Settling tanks, a single series of two percolating filters over which the sewage is spread by means of sprays and a revolving spreader; also land for secondary treatment. The land frequently becomes choked with suspended matter carried through

the filters from the tanks which do not appear to be emptied often enough. The area of the percolating filters is small considering the large volume of sewage requiring treatment and the spreader on one filter has acted very imperfectly for years past.

Birtley.—Settling tanks, and land irrigation works waterlogged and much too small to properly purify the sewage reaching them.

Edmondsley.—Settling tanks and land irrigation. Fairly satisfactory.

New Lambton, etc.—Covered tanks and a double series of contact beds. Works need enlarging.

Sacrison and Sunniside.—The works at these places consist of installations of tanks and double contact beds which with proper attention usually give fairly satisfactory results.

DARLINGTON RURAL DISTRICT.

Harrowgate Hill.—Settling tanks and a double series of contact beds. Usually satisfactory.

Hurworth Place and Sadberge.—Small receiving tanks from which the sewage is pumped on to grass land for irrigation purposes with fairly good results.

Hurworth Village, High and Low Coniscliffe.—Settling tanks and land. Results at each place usually satisfactory.

Middletown-one-Row.—Settling tanks and land. Results frequently not satisfactory.

Blackwell.—Covered settling tank and irrigation in small plantation. Better attention is required.

Piercebridge.—Settling tanks and irrigation in gravelly subsoil. Results usually satisfactory.

DURHAM RURAL DISTRICT.

Aldin Grange and Shincliffe.—Small tanks and land irrigation. Both works very satisfactory.

Bearpark Colliery.—Settling tanks, a single series of percolating filters and land. Mining operations are affecting works.

Brief
description of
sewage disposal
works.

Broompark.—Cosham's tanks and land irrigation. Fairly satisfactory .

Carville, Broomside, etc.—Settling tanks, a double series of contact beds operated by automatic gear with land for secondary treatment when necessary, and a storm water filter. Usually very satisfactory.

Crossgate Moor.—Tanks, slate and clinker contact beds operated by automatic gear. Effluent fairly satisfactory.

Croxdale Colliery.—Tanks and breeze filters. Results not always satisfactory.

Framwellgate Moor and Sherburn Village.—Settling tanks and a single series of percolating filters fed by revolving spreaders, are in operation at each of these places. Usually satisfactory.

Gilesgate Moor and Ushaw Moor.—The works at these places consist of settling tanks, a single series of contact filters, and secondary treatment by land irrigation. Usually satisfactory, but the latter works are being affected by mining operations.

Neville's Cross.—Settling tanks, a double series of contact beds, and land to take the sewage at the week-ends. Usually satisfactory.

Sherburn House Pit Row.—Settling tanks and a double series of percolating filters fed by means of tippers. Results satisfactory.

Sunderland Bridge.—A small installation consisting of tank, breeze filters, and land. Character of effluent cannot be determined as it is carried beneath the flow of the river.

EASINGTON RURAL DISTRICT.

Deaf Hill and Trimdon Foundry.—Tanks and one percolating filter fed by revolving distributor. Too small. Sewage turned into stream when cleansing tanks, etc.

Murton Colliery.—Settling tanks and a single series of two percolating filters fed by means of a revolving water wheel spreader. Too small. Overflow pipe frequently in operation.

Shotton Colliery.—Settling tanks and a single series of percolating filters fed by revolving spreaders. Too small.

Thornley Colliery.—Settling tanks, percolating filters for sewage and storm water, also a small area of secondary sand filters. Sludge dug into waterlogged land. The latter is not satisfactory.

HOUGHTON-LE-SPRING RURAL DISTRICT.

Sedgeleth—Fence Houses and South Biddick.—Settling tanks and land irrigation. Results from both works fairly satisfactory.

William Henry Pit.—Tanks and a single series of percolating filters fed by tippers. Treatment often insufficient.

LANCHESTER RURAL DISTRICT.

Bunker Hill.—No tank. Irrigation on grass land with satisfactory results.

Medomsley.—Settling tanks and irrigation on grass land with satisfactory results.

Cornsay Colliery.—Settling tanks, one percolating filter, and land. Results fairly satisfactory.

Craghead.—Tanks, a double series of contact filters and land. Works much too small.

Croniwell.—Settling tanks and percolating filters fed by sprays and revolving spreaders with fairly satisfactory results.

Esh Winning.—Settling tanks and a double series of contact beds. Results not always satisfactory.

Holmside.—Settling tanks and percolating filters. Effluent often capable of being improved.

Langley Park.—Settling tanks, a primary series of contact beds and a secondary series of percolating filters fed by sprays. Capable of being improved.

Brief
description of
sewage disposal
works.

Malton Colliery.—Tanks, and three sand and breeze filters. Imperfect distribution of the sewage conduces to bad results.

Pear Tree—Holmside.—Small installation, consisting of tank and percolating filter fed by sprays. Results fairly good.

Quebec.—Tanks, primary contact beds and secondary percolating filters fed by revolving spreaders. Results usually good.

Ushaw Moor.—Tanks and a double series of percolating filters. Results very good.

Waterhouses Station.—Settling tanks and land irrigation. Results very good.

The Middles—Craghead.—Tanks, a primary series of contact beds fed by sprays, and secondary percolating beds fed by revolving spreaders. Results fairly good.

Derwent Cottages.—Tanks and a double series of contact beds. Capable of being considerably improved.

SEDGEFIELD RURAL DISTRICT.

Coxhoe.—Cosham's tanks and irrigation on grass land. Effluent usually good.

Cornforth and Cornforth Lane.—Cosham's tanks and irrigation on garden with usually good results.

West Cornforth.—Cosham's tanks and land irrigation. Effluent usually good, but the appearance of the works is capable of being considerably improved.

Chilton Lane—Ferryhill.—Settling tanks, percolating filters with revolving spreaders, storm water bed and land. Results usually very satisfactory.

Ferryhill.—Two installations, consisting of tanks, percolating filters with revolving spreaders and land. Results usually fairly satisfactory.

Sedgefield.—Cosham's tanks and land. Effluent often unsatisfactory, owing to rat runs allowing the sewage to reach the beck without proper filtration.

Windlestone.—Settling tanks, percolating filters, storm water bed and land. Results fairly satisfactory.

Trimdon Colliery.—Cosham's tanks and land irrigation. The land needs attention and should be turned over more frequently.

East Howle and Thinford.—Cosham's tanks and land irrigation. Works need more attention.

Bishop Middleham.—Tanks and percolating filters. Effluents in the past have not been good.

STOCKTON RURAL DISTRICT.

Stillington.—Tanks and irrigation on some clay land which has been lightened by having breeze dug into it. Better attention should be given to the distribution of the sewage.

WEARDALE RURAL DISTRICT.

Frosterley, Ireshopeburn, St. John's Chapel, Wearhead, Westgate, Wolsingham.—The sewage of each of these places is dealt with by means of irrigation on plots of grass land in the immediate vicinity of the villages with usually very satisfactory results. In summer time there is often absolutely no effluent from any of the works. No tanks are provided, consequently the sewage reaches the land in a fresh condition.

ANNFIELD PLAIN URBAN DISTRICT.

Kyo.—Settling tanks; a double series of percolating filters with revolving spreaders and a storm water filter. Extensions in hand.

Dipton.—Settling tanks; one series of percolating filters with revolving spreaders and a storm water filter. Additional works just completed.

BARNARD CASTLE URBAN DISTRICT.

Brief
description of
sewage disposal
works.

Barnard Castle.—Settling tanks, and land filtration. Land cultivated and results are usually satisfactory.

BENFIELDSIDE URBAN DISTRICT.

Shotley Bridge.—Covered tanks and percolating filters upon which the sewage is distributed by trays. Unsatisfactory. Works to be improved.

BLAYDON URBAN DISTRICT.

High Spen.—Two installations of open settling tanks with land filtration. Capable of being considerably improved.

Whiskey Bridge, Rowlands Gill.—Covered tanks and a double series of contact filters. Results very satisfactory.

BRANDON AND BYSHOTTLES URBAN DISTRICT.

Hedley Hill.—Cosham's tanks and small area of land. Satisfactory.

Langley Moor.—Cosham's tanks and filtration through grass land. Fairly satisfactory.

Littleburn Colliery.—Covered tanks; percolating filters upon which the sewage is distributed by means of trays and secondary filtration through engine ashes. Usually very satisfactory.

Lymington Terrace.—Tanks, chemical precipitation and filtration through sand and gravel. Too small.

Waterhouses.—Cosham's tanks and land filtration. Effluent usually good.

West Sleetburn.—Two installations, one consisting of precipitation in Cosham's tanks with filtration through breeze and garden land, and the other of precipitation in ordinary tanks with one percolating filter with revolving distributor. Results usually fairly satisfactory.

Brownery Colliery.—Open tanks; a double series of contact beds, and a storm water filter. Usually found fairly satisfactory.

CHESTER-LE-STREET URBAN DISTRICT.

Chester-le-Street.—About half of the sewage is passed through open tanks and a double series of contact beds. The remainder without any tankage is treated on land growing garden crops. By no means satisfactory.

Chester Moor Colliery.—Covered tanks and a double series of contact beds. Fairly satisfactory.

CONSETT URBAN DISTRICT.

Stamfordham, Consett.—Land irrigation only. Usually very satisfactory.

Crookhall, Consett.—Settling tanks and a double series of contact beds. Fairly satisfactory.

CROOK URBAN DISTRICT.

Escomb Sewage Farm.—Open tanks and land irrigation. Fairly satisfactory if properly used.

DARLINGTON URBAN DISTRICT.

Stressholmes, Darlington.—Sewage pumped and irrigated on land with fairly satisfactory results.

HETTON URBAN DISTRICT.

Brief
description of
sewage disposal
works.

Glebe Farm, Rainton Bridge.—Settling tanks; land irrigation, night flow and storm water filters. Works seriously affected by mining operations. Effluent usually satisfactory.

HOUGHTON-LE-SPRING URBAN DISTRICT.

Houghton-le-Spring.—Settling tanks, land irrigation and night flow and storm water filters. Works seriously affected by mining operations. Effluent usually far from satisfactory.

LEADGATE URBAN DISTRICT.

Leadgate.—Settling tanks and a double series of contact beds. Works affected by mining operations, but are usually satisfactory.

SHILDON URBAN DISTRICT.

Shildon.—Settling tanks, percolating filters with revolving sprinklers and land irrigation. Fairly satisfactory when properly attended to.

SPENNYMOOR URBAN DISTRICT.

Spennymoor.—Settling tanks and a double series of contact beds. Works not in use. A comprehensive scheme for whole district is required and has been under consideration for some years past.

STANLEY URBAN DISTRICT.

Stanley.—Settling tanks, percolating and contact beds over which the sewage is sprayed. Results excellent, but the works are being seriously affected by mining operations.

South Moor.—Settling tanks and a double series of contact beds. Excellent results but works too small.

TANFIELD URBAN DISTRICT.

Tantobie and White-le-Head.—Settling tanks and land filtration. Not satisfactory.

Tanfield Lea.—Settling tanks and a double series of contact beds. Usually fairly satisfactory.

Tanfield Hospital.—Settling tanks and two percolating filters. Usually fairly satisfactory.

Clough Dene.—Settling tanks and a double series of contact filters. Usually fairly satisfactory.

Lintz Colliery.—No tanks. Filtration through grass land. Usually fairly satisfactory.

Causey.—Settling tanks and a double series of contact beds. Very satisfactory.

TOW LAW URBAN DISTRICT.

Tow Law.—Settling tanks and filtration through slag heaps. A primary series of contact beds provided but not yet in use. Not satisfactory.

WILLINGTON URBAN DISTRICT.

Willington.—Covered tanks; primary percolating filters with tray spreaders and land for secondary treatment. Not satisfactory.

EXCREMENT DISPOSAL AND REMOVAL.

It will be seen from the table on page 69 that the conservancy method of excrement disposal is the one most widely

adopted throughout the county. Comparatively a few years ago in most districts of this county the ashpit-privy was almost universally in use. Now, it will be seen that these insanitary conveniences, condemned by all sanitarians, have to a considerable extent, been replaced by ash-closets. The number of water-closets in the county is also rapidly increasing and in the near future I am confident that in our larger communities the water-closet will be the only type of convenience that will be permitted for new houses, or for houses with defective closet accommodation which requires renewing. This requirement has already been adopted in several districts of this county and in a number of others the medical officers of health strongly advocate its adoption.

Excrement disposal and removal.

Ashpit privies.

For the information given in the table I am indebted to the sanitary inspectors of the various districts. In some districts it has only been possible to obtain approximate figures, but I shall hope to reproduce the table in a more complete form next year.

Statement of different forms of convenience.

The work of scavenging and removal of excrement is, in most of the districts, let by contract, though in a few the district councils employ their own workmen and plant for the work. In portions of some of the rural districts the occupiers are still responsible for their own scavenging, the work, in consequence, often being inefficiently done. Trouble with the contractors was experienced in portions of the rural districts of Easington, Houghton-le-Spring and Sedgefield, and it is pointed out in the reports that care is necessary in allotting the contracts, and doubtless if payments were more frequently withheld from defaulters the work would be better done. But efficient scavenging which is termed by Dr. Hunton as “the ‘soul of sanitation’” depends upon more than the regularity of the visit of the scavenger. More important than regularity is frequency, whereas in districts served by midden privies the terms of contract usually permit fortnightly or monthly scavenging. Of equal importance is thorough cleansing and removal of the refuse without pollution of the ground, neither of which conditions can the most conscientious scavenger be expected to fulfil in many places in this county.

Scavenging.

Excrement
disposal and
removal.

The ashcloset is admittedly a great advance upon the privy midden. It is less offensive, it is easy to cleanse (if well constructed), but its chief advantage—that it must be frequently emptied—is in itself a serious weakness in the system. During the operations of the scavenger the air becomes laden with dust, charged it may be with most deadly germs. Likewise the soil becomes polluted in all directions by the leakage of contents from faulty hatches or through the carelessness of the scavenger who is also not infrequently at fault in overloading his cart. Under any circumstances, I fear, the presence of ash-closets is likely to be a perpetual source of nuisance to a neighbourhood and the only remedy would appear to be the adoption of the water-carriage system, to the many advantages of which I need not again refer.

Water-carriage
system.

Refuse tips.

In nearly all the districts the refuse is deposited on to tips or is disposed of to farmers who spread it on to the land. I would again remark that it is very desirable that local authorities should in making contracts for the removal of offensive refuse in their districts insist that the contractors do not establish tips in positions where nuisances may arise.

Statement showing the number of different forms of convenience in each sanitary district, the number of ashpit-privies converted into ash-closets or water-closets, and the number of ash-closets converted into water closets.

District.	Total number in District.			Ashpit-Privies converted into		Ash-Closets converted into Water-Closets.	Statement of different forms of convenience in the county sanitary districts.
	Water-Closets.	Ash-Closets.	Ashpit-Privies.	Ash-Closets.	Water-Closets.		
URBAN.							
Darlington Borough ...	3489	5395	2665	...	37	...	
Durham „ ...	1207	...	528	...	6	...	
*Hartlepool „ ...	...	4	5	...	...	...
Jarrow „ ...	560	5000	...	...	...	1	
Stockton „ ...	Not stated			...	214	1	
Annfield Plain	329	974	1376	23	1	...	
Barnard Castle	762	94	115	...	8	3	
Benfieldside	315	298	937	52	13	5	
Bishop Auckland	1713	688	764	30	41	...	
Blaydon	680	3228	1360	46	64	4	
Brandon & Byshottles.	50	2450	634	367	..	...
Chester-le-Street	1170	1573	230	143	15	6	
Consett	694	664	735	...	...	...
Crook	162	1436	415	157	9	...	
Felling	278	4634	62	25	3	8	
Hebburn	208	4083	86	33	1	8	
Hetton-le-Hole	15 ⁰ / ₀	80 ⁰ / ₀	5 ⁰ / ₀	22	1	4	
Houghton-le-Spring ..	373	306	1208	40	1	...	
Leadgate	99	100	435	...	2	2	
Ryton	387	1016	958	2	1	...	
Seaham Harbour	1358	481	...	...	...	4	
Shildon	599	2447		...	35	..	
Southwick-on-Wear ...	864	788	819	...	49	11	
Spennymoor	253	2657	780	66	6	...	
Stanhope	108	194	43	2	...	8	
Stanley	437	2294	1393	...	18	...	
Tanfield	78	1060	950	94	2	...	
Tow Law	32	375	?	13	...	...
Whickham	92	2628	16	19	2	...	
Willington	120	650	150	116	8	...	
RURAL							
Auckland	277	8060	2345	328	9	...	
Barnard Castle	331	739	1484	13	17	3	
Chester-le-Street	Not stated			275	26	2	
Darlington	385	365	1537	9	...	...
Durham	Not stated			Not stated		...	
Easington	Not known			585	...	...
Hartlepool	43	255	205	7	...	1	
Houghton	120	3500	800	164	2	...	
Lanchester	Not stated			120	7	...	
Sedgefield	68	5088		36	2	...	
South Shields	884	2199	310	96	17		
Stockton	572	2212	144	12	6		
Sunderland	507	3830	1030	171	23	4	
Weardale	74	68	1978	...	...	...

NOTE.—In several instances the figures given are only approximate, but more definite information is promised, and no doubt in subsequent years this table will be more complete and reliable.

* Water-closet town.

DAIRIES, COWSHEDS, AND MILKSHOPS.

In the majority of the reports only brief reference is made to the sanitary circumstances affecting the milk supply, but it appears that more attention may be expected to this important matter in the future. New regulations were adopted for the Benfieldside, Bishop Auckland, and Consett Urban Districts, and for the Darlington and Lanchester Rural Districts, and it is satisfactory to record that in all cases the standard recommended by the County Council, viz., a minimum air space of 600 cubic feet and a floor space of 50 square feet was adopted, except in the Lanchester Rural District where the minimum adopted was 500 cubic feet. The Councils of the Felling Urban District and the Sedgefield Rural District have the revision of their bye-laws under consideration.

New regulations requiring a minimum air-space of 600 cubic feet.

Outbreaks of enteric fever due in part to the infection of milk supplies occurred in the Willington Urban District and in the Easington Rural District and have been referred to on pages 24 and 26.

Milk supplies and enteric fever.

The prevention of the sale of milk derived from tuberculous cows is discussed in several reports, but this question may be said to be in abeyance pending the passing of the promised Milk Bill. In Southwick and in the Sunderland Rural District the dairy cows were again subjected to veterinary inspection. In the Durham Rural District action was also taken in one instance for the isolation of a tuberculous cow.

Milk supplies and tuberculosis.

SLAUGHTER-HOUSES.

In the reports favourable comment is usually expressed upon the maintenance of these premises, but a number of medical officers of health are of the opinion that public slaughter-houses would be of service in their districts, mainly because a large proportion of the existing premises are situated in undesirable proximity to dwellings or are not of modern construction. A further important consideration is the fact that under present conditions adequate supervision of the meat supplies cannot be maintained. The prompt removal

Public slaughter-houses recommended.

of offal from these premises is under the circumstances a matter of great importance, but there are places known to me where the butchers experience considerable difficulty in arranging for its disposal, and its removal, therefore, is frequently delayed. In such places it is very desirable that the district councils should arrange for the systematic and periodical removal of all offal from slaughter-houses. Under the Public Health Acts Amendment Act, 1907 (Section 48), the local sanitary authority may be required by the owner or occupier of any premises to remove trade refuse, and a fee may be charged for the work.

Slaughter-houses.
Removal of
offal by
sanitary
authorities.

FOOD AND DRUGS ACTS.

The number of samples taken for analysis in the Administrative County, exclusive of boroughs, by the county or district officials during 1910, was 869, and of these 92 or 10·5 per cent. were certified to be adulterated. In the previous year the number analysed was 841, of which 85, or 10·1 per cent. were found to be adulterated.

The administration of the Acts in the non-county boroughs is undertaken by the local officials, and of the 365 samples taken for analysis, 18, or 4·9 per cent. were certified to be adulterated.

The taking of samples under the Food and Drugs Acts in this Administrative County is in the hands of the Chief Inspector of Weights and Measures, who reports direct to the Executive Committee of the County Council.

FACTORIES AND WORKSHOPS.

Only a few district annual reports deal at any length with the sanitary condition of these places, though each report includes statistical information contained in the table issued by the Secretary of State, which is required to be attached to the annual report. It would appear from the reports that in most districts the sanitary condition of the factories and workshops is on the whole satisfactory. The number of persons undertaking homework in the county appears also to be very small.

COMMON LODGING HOUSES.

With few exceptions I fear the common lodging houses in this county afford the usual meagre and sometimes squalid accommodation so commonly met with in such places in other parts of the country. In several districts, notably at Consett and Houghton-le-Spring, an attempt has been made to raise the general standard of comfort and sanitation, but it would appear that such attempts are not likely to be successful unless there is a good proportion of fixed residents in the houses. A few more well-managed up-to-date lodging houses would undoubtedly be useful in some of our more overcrowded districts, but I should regret to see such establishments taken possession of by the undesirable vagrants who are the main supporters of the present establishments. In the interests of the community the latter should undoubtedly be improved, but progress in this direction will, I fear, be slow unless the health authorities throughout the country take concerted action and the State comes to their assistance with a measure controlling vagrancy.

STREETS AND BACK STREETS.

At the present time stress is rightly laid upon the influence of environment, and for a certain class of tenant undoubtedly the size of the house, provided there are two rooms of good size, is of less importance than the surroundings of the house. Before the days of bye-laws it was common for rows of cottages to be erected in this county without any paving of an impervious nature being laid in their vicinity. It is now, I am glad to say, a common experience to sanitary officials in this county to see the magical effect of cement when applied to the surroundings of these old houses—sometimes it may be the result of the provision of only a broad cement footpath, though the best effects are seen when self-contained yards are imperviously paved. The gain to comfort and cleanliness is enormous, and there would be a similar improvement to health were it not that the condition of the back streets is so frequently unimproved. Even with respect to new property, both in the rural districts and in many of the urban districts, streets are frequently left in an unmade condition, as is evident from the numerous recommendations that occur in the

Value of
impervious
paving.

reports of the district medical officers of health on this point. It is the back street that usually calls for comment for the reason that in many of the villages in this county it is most used by the inhabitants and tradespeople, and because in or abutting on the back street the sanitary conveniences are situated and the liability to fouling of the surroundings is greatest. In winter-time these unmade streets become almost impassable, whilst in the summer their soft porous surfaces become admirable breeding grounds for the germs of disease.

Streets and
back streets.

These facts, I am pleased to say, are receiving more general recognition throughout the county, and the progress that has been made in recent years in certain of the urban districts, and in some townships in rural areas, will undoubtedly be an object lesson to other districts more backward in this respect. Moreover, in street works there is a general tendency to adopt tar-macadam in place of more expensive materials of an impervious nature, and this should do much to dispel the objections that have hitherto been raised by property owners. Tar-macadam, I believe, deserves to rank with cement as an agent of sanitary reform. A street well made with this durable material does not allow of foul matters percolating into and contaminating the soil, has a hard impervious surface which is scoured by every heavy shower of rain and is easy to cleanse in any weather, whilst the improvement effected to the surroundings of the adjacent houses cannot but be reflected in the habits of the occupiers, even of those of the most careless disposition.

MIDWIVES ACT.

The County Council has delegated to its Midwives Committee the administration of this Act and, as Executive Officer, I am responsible for the supervision of all certified midwives in the county. It is the practice of the County Midwives Inspector to visit each midwife at least once every three months, and she presents to me a report on her work every quarter. The very marked improvement in the cleanliness and efficiency of the midwives in the county, since the administration of this Act by the County Council, has been maintained.

Supervision of
midwives.

**Number of
certified and
practising
midwives.**

The number of certified midwives living in the county on the 31st March, 1911, was 236, of whom only 60 held the certificate by virtue of having passed the examination of the Central Midwives Board or an examination recognised by the Board. 163 midwives notified their intention to practise during 1910, as compared with 161 in 1909.

**Puerperal
fever.**

During 1910, ten cases of puerperal fever in the practices of midwives in the county were brought to my notice and all necessary precautions to prevent the spread of infection were insisted upon. In each case the district medical officer of health is notified. The number of still-births reported to me by midwives was 105, and 117 intimations of midwives sending for medical help were also received, as were notices of the deaths of 14 infants in the practices of midwives; all such deaths were the subject of special enquiry by the Midwives Inspector.

**Midwives'
notifications.**

**Deaths and
changes of
address.**

The deaths of four midwives and 40 changes of address were also reported to me.

**Removals from
Roll for
misconduct, &c.**

The name of one midwife was, at the instance of the Local Supervising Authority, removed from the Midwives Roll on account of misconduct, and two midwives voluntarily surrendered their certificates on account of ill-health and old-age. Eighteen certified midwives were warned by the Executive Officer for breaches of the Rules of the Central Midwives Board, and one was severely censured by the Local Supervising Authority.

Representations as to two midwives were formally made to the Central Midwives Board on account of alleged misconduct under Section 8 (2) of the Midwives Act, 1902, with the result that one was withdrawn owing to further information, favourable to the midwife, coming to the knowledge of the Executive Officer, whilst in the case of the other her name was removed from the Roll and her certificate cancelled as above stated. In the case of a midwife reported for misconduct, which was outstanding at the end of the previous year, the Central Midwives Board severely warned the woman.

Warning letters were sent to 12 women practising as midwives without the certificate of the Central Midwives Board, and in other two cases the Midwives Committee authorised proceedings being taken, but owing to the great difficulty in obtaining sufficient evidence to secure convictions the cases are still standing over.

Unqualified
practice.

The greatest obstacle to the proper administration of the Midwives Act is the continued practice of uncertified midwives, who are almost invariably uneducated and unsatisfactory and, moreover, are not subject to supervision. An increasing number of complaints have been received as to unqualified practice, but there is the greatest difficulty in obtaining satisfactory evidence that the women are practising "habitually and for gain otherwise than under the direction of a qualified medical practitioner." In some instances no doubt the women have engaged in unqualified practice from ignorance of the law, and on their attention being drawn to the matter they have ceased to continue, but I have evidence that there are a number of unregistered women in the county who carry on a considerable midwifery practice but who do not openly advertise themselves as midwives and do not make any definite charge for their services. It is extremely difficult to get the patients of such women to give evidence in support of any prosecution under the Midwives Act and in practice it is almost impossible, except in flagrant cases, to secure a conviction in the present state of the law. Moreover, some of these unqualified women when called in to a prospective patient tell her that they are unable to attend unless a doctor is engaged and a medical practitioner is, therefore, provisionally engaged, though in the great majority of such cases the confinement is undertaken by the unqualified woman in the absence of a medical practitioner. It is certainly undesirable that the attendance of unqualified women in cases of real emergency should be prohibited, for in out of the way rural districts the lack of such temporary help might cause hardship and possibly, in some cases, serious risk to life, but such practice should be restricted to emergency cases, and it is to be regretted that medical practitioners do not in all cases definitely set their faces against the habitual continuance of such practice.

Suggested
amendment of
Midwives Act.

For some time past the question of amending the Midwives Act has been under consideration, and in the early part of this year the Central Midwives Board asked the opinion of the County Council as to the desirability of omitting from Section 1 (2) of the present Midwives Act the words "habitually and for gain." In their reply the County Council informed the Board that in their opinion the Section in any amendment of the Act should be altered by the omission of the words "habitually and for gain," and by the substitution of the words "under the *immediate personal* direction of a qualified medical practitioner" for the words "under the direction of a qualified medical practitioner." The sub-section so altered would read as follows, and its enforcement would, I think, have the effect of putting a stop to illegal midwifery practice:—"No woman shall "attend women in childbirth otherwise than under the *immediate personal* direction of a qualified medical practitioner unless she be "certified under this Act; any woman so acting without being certified under this Act shall be liable on summary conviction to a fine "not exceeding £10, provided that this Section shall not apply to "legally qualified medical practitioners or to anyone rendering "assistance in a case of emergency."

Extent of
midwives'
practices.

From statistics prepared for me by the Midwives Inspector it appears that the number of births attended by certified midwives in the Administrative County during 1910, was 4,205, which is equal to 14 per cent. of the total registered births.

Midwifery
scholarships.

Three women were awarded County Council scholarships on the recommendation of the Midwives Committee, and one of the previous year's scholarship holders was successful in obtaining her certificate, and is now practising in the county.

Rule B 2,
number
enrolled under.

During the year the Privy Council sanctioned a new rule enabling the Central Midwives Board, within a limited period, to grant a certificate to any bona fide midwife, who had failed to claim to be certified under the Midwives Act within the time limited by Section 2 of the Act, on satisfying the Board that but for her failure so to claim she would have been entitled to be certified under the Act. 62 applications from women in this county were made under

this rule, and the character and competency of each applicant was the subject of enquiry by me. 17 of these women were awarded the certificate, whilst most of the others were ineligible or were refused for various other reasons.

At the request of the Central Midwives Board a leaflet drawn up by the Board with reference to the prevention of inflammation of the eyes in new-born children was distributed to the certified midwives in the county by the County Midwives Inspector, who explained the leaflet to them. Also at the request of the British Medical Association, copies of a leaflet containing an appeal to midwives and nurses in order to promote the early recognition of cancer of the womb were circulated by me.

**Ophthalmia
neonatorum.**

**Cancer of the
womb.**

Correspondence took place with the Central Midwives Board as to the suggestion of the Herts County Council that the penal procedure of the Board (Rule D) should be amended so as to provide that when a midwife is charged with mal-practice, negligence, or misconduct under Section 8 (2) of the Midwives Act, the Local Supervising Authority should, if they so desire, have the conduct of the case, the Board acting in a purely judicial capacity. It was also suggested that the Local Supervising Authority when undertaking the conduct of a case should bear all the cost in connection with the witnesses and the midwife attending the hearing. The County Midwives Committee was not satisfied that any alteration was necessary, but recommended that if a change were made it should be on the lines suggested by the Newcastle-on-Tyne Corporation, viz., the procedure to be conducted according to the existing rules but in courts moveable amongst the chief towns.

**Suggested
alteration of
penal procedure**

The Council of the Stockton Division of the North of England Branch of the British Medical Association wrote suggesting that the payment of medical practitioners called in to assist midwives should be made through the Local Supervising Authority and not through Boards of Guardians, but under the existing law Local Supervising Authorities have no power to make such payments, and no action was taken.

**Payment for
medical
assistance
called in by
midwives.**

BYE-LAWS.

In several districts during the year the revision of bye-laws with respect to new streets and buildings was under consideration and in the Chester-le-Street Rural District new bye-laws came into force. In several districts, notably Tow Law and the Rural District of Sedgfield, these bye-laws are either out of date or inadequate. In only a comparatively few reports is any special reference made to the bye-laws relating to public health which are in force in sanitary districts.

Inadequacy of
certain
byelaws.

In the following districts there appear to be no bye-laws with respect to slaughter-houses, and this deficiency ought to be remedied:—Hebburn U.D., Hetton U.D., Hartlepool R.D., Sedgfield R.D., Sunderland R.D., and Weardale R.D.

Slaughter-
houses.

The attention of the district sanitary authorities has been called by the County Council to the importance of proper regulations, including a minimum cubic air-space per cow, as respects dairies, cowsheds, and milkshops, and in a number of districts new regulations have either been adopted or are under consideration.

Dairies and
cowsheds, &c.

SANITARY LEGISLATION, 1910.

During the year the following important Orders and Regulations were issued by the Local Government Board:—

THE COUNTY MEDICAL OFFICERS OF HEALTH (DUTIES) ORDER, 1910.—This Order was made in July, 1910, under Sub-Section 2 of Section 68 of the Housing, Town Planning, &c., Act, 1909, wherein it is enacted that the duties of a Medical Officer of Health of a County shall be such as may be prescribed by General Order of the Local Government Board and such other duties as may be assigned to him by the County Council. Under this Order the County Medical Officer shall:—

- (1) Inform himself as far as practicable respecting all influences affecting or threatening to affect injuriously the public health in the County.
- (2) Inquire into and report on the isolation hospital accommodation in the county and on the need for further accommodation.
- (3) Communicate to district Medical Officers of Health any information he may possess as to danger to health threatening their district.
- (4) Consult with district Medical Officers of Health when circumstances render this desirable.
- (5) Obtain from district Medical Officers of Health the necessary information as to vital statistics, sanitary circumstances and housing which may be omitted from their annual reports.
- (6) Make special reports when required to the County Council or the Local Government Board; and
- (7) Make an annual report to the County Council each year on the sanitary circumstances and administration and vital statistics of the county; and the Order also defines various subjects which shall be dealt with in that report. The Board in their circular express the opinion that it is desirable that the County Medical Officer should hold the post of School Medical Officer. They also state that the administration of the Food and Drugs Acts should as a rule be under the supervision of the County Medical Officer and that where this is not so it should be carried on in consultation with him by the officer administering Acts.

HOUSING (INSPECTION OF DISTRICT) REGULATIONS, 1910.—These regulations were issued in September, 1910, in accordance with Sub-Section (1) of Section 17 of the Housing, Town Planning, &c., Act, wherein “ it is enacted that it shall “ be the duty of every local authority within the meaning “ of Part II. of the Housing of the Working Classes Act, “ 1890 (hereinafter referred to as ‘ the local authority ’) “ to cause to be made from time to time inspection of “ their district, with a view to ascertain whether any “ dwellinghouse therein is in a state so dangerous or in- “ jurious to health as to be unfit for human habitation, “ and that for that purpose it shall be the duty of the “ local authority, and of every officer of the local “ authority, to comply with such regulations and to keep “ such records as may be prescribed by the Local Govern- “ ment Board.”

Under these regulations “ The local authority shall as early “ as practicable after the date of this Order take into “ consideration the provisions of Sub-Section (1) of “ Section 17 of the Act of 1909, and shall determine the “ procedure to be adopted under these Regulations to give “ effect to the requirements of that sub-section in regard “ to the inspection of their district from time to time.”

As part of their procedure the local authority shall :—

- (1) Make provision for a thorough inspection to be carried out from time to time of the dwelling-houses or localities in the district.
- (2) Cause to be prepared from time to time under the supervision of the Medical Officer of Health a list of dwellinghouses, the early inspection of which is in the opinion of the Medical Officer of Health desirable.

- (3) Cause to be prepared under the direction and supervision of the Medical Officer of Health records of the inspection of dwellinghouses made under Section 17 (1) of the Act.

Housing
(Inspection of
District)
Regulations,
1910.

- (4) Take into consideration at each of their ordinary meetings the records so prepared.

The Regulations also prescribe the matters to be enquired into when inspections are made, viz. :—

- (1) The arrangements for preventing the contamination of the water supply.
- (2) Closet accommodation.
- (3) Drainage.
- (4) The condition of the dwellinghouse in regard to light, the free circulation of air, dampness and cleanliness.
- (5) The paving, drainage and sanitary condition of any yard or outhouse belonging to or occupied with the dwelling house.
- (6) The arrangements for the deposit of refuse and ashes.
- (7) The existence of any room which would in pursuance of Sub-Section (7) of Section 17 of the Act of 1909 be a dwellinghouse so dangerous or injurious to health as to be unfit for human habitation.
- (8) Any defects in other matters which may tend to render the dwellinghouse dangerous or injurious to the health of an inhabitant.

and further it is required that the records shall contain information under appropriate headings and the Medical Officer of Health shall include in his annual reports information and particulars in tabular form in regard to :—

- (1) The number of dwellinghouses inspected under and for the purposes of Section 17 of the Act of 1909.
- (2) The number of dwellinghouses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation.
- (3) The number of representations made to the local authority with a view to the making of closing orders.
- (4) The number of closing orders made.
- (5) The number of dwellinghouses the defects in which were remedied without the making of closing orders.
- (6) The number of dwellinghouses which after the making of closing orders were put into a fit state of habitation, and the general character of the defects found to exist.

THE DIPHTHERIA ANTI-TOXIN (OUTSIDE LONDON) ORDER, 1910.—

This Order was issued on 16th August, 1910, under Section 133 of the Public Health Act, 1875, wherein it is enacted that any local authority “ may, with the sanction “ of the Local Government Board, themselves provide or “ contract with any person to provide a temporary supply “ of medicine and medical assistance for the poorer in- “ habitants of their district.” The Order sanctions the provision of Anti-Toxin by the Councils of County Boroughs, Urban Districts, and Rural Districts.

In the Circular which accompanied the Order it is pointed out that "the free provision of anti-toxin, which is "authorised by the Order, must not be regarded as a "substitute for removal to hospital of a patient suffering "from diphtheria, nor implying that the patient to whom "the anti-toxin has been administered may properly be "retained at home for treatment, unless means are available for his efficient isolation to the satisfaction of the "medical officer of health."

Diphtheria
Anti-toxin
(outside
London) Order,
1910.

ADOPTIVE ACTS.

During 1910 parts of the Public Health Acts Amendment Act, 1907, were adopted by the sanitary authorities of five urban and three rural districts, and by the end of the year 10 sanitary authorities in the county had received the sanction of the Local Government Board to such adoption.

P.H.A.
(Amendment)
Act, 1907.

The Notification of Births Act is in force in the Urban Districts of Stockton, Brandon, Shildon, Southwick-on-Wear, Stanley, and Whickham, the execution of the Act being effected by one or more health visitors. No sanitary authority adopted the Act during 1910.

Notification of
Births Act.

During part of 1910 it was found necessary to put the Education (Provision of Meals) Act into operation in Southwick Urban District and Sunderland Rural District (Fulwell).

Education
(Provision of
Meals) Act.

LOCAL GOVERNMENT BOARD ENQUIRIES.

The following Local Government Board enquiries were held during the year into applications from Local Authorities in the county for loans for sanitary purposes and other matters of sanitary import:—

1910.	Applicant.	Amount.	Purpose.	Result.
Jan. 27	North - East Durham Joint Smallpox Hospital Board and Felling U.D.C. ...	...	Amendment of the Provisional Order constituting the Borough of Jarrow, the Urban Districts of Felling, Hebburn, and Southwick-on-Wear, and the Rural Districts of South Shields and Sunderland the North-East Durham Joint Smallpox Hospital District by the inclusion of the Co. Boro. of South Shields and the exclusion of Felling Urban District ...	Provisional Order for extension made; Felling application disallowed.
Feb. 2	Stockton-on-Tees Corporation ...	£5,569	Extension of the water mains of the Tees Valley Water Board ...	Application granted for £5,512.
„ 16	Easington R.D.C. ...	£3,030	Sewerage and sewage disposal for Thornley and Wheatley Hill ...	Application granted — £1,106 for Thornley and £1,403 Wheatley Hill
Mar. 9	Durham R.D.C. ...	£800	Water supply for the Township of Shadforth (including certain works in the Township of Sherburn) ...	Application withdrawn
Sep. 21	Easington R.D.C. ...	£4,800	Sewerage and sewage disposal for the Township of Easington ...	Application granted for £4,000.
„	„ „	£1,464	Sewerage and sewage disposal for Horden ...	Application granted.
Oct. 4	Durham County Council ...	...	Complaint under Section 299 of the Public Health Act, 1875, that the Durham R.D.C. had made default in providing the village of East Hetton with sufficient sewers and in maintaining existing sewers ...	L.G. Board satisfied that R.D.C. had made default & request'd that an efficient scheme for the sewerage of the village be submitted to them within 3 months.
Dec. 2	Mr. John Bagnall, Riding Mill ...	...	Appeal against the Closing Orders made by Blaydon U.D.C. respecting houses Nos. 4, 15, 17, 19 and 21, Bagnall Terrace, Winton ...	Appeal not allowed.

COUNTY COUNCIL ENQUIRIES.

There were no enquiries bearing on public health administration held by the County Council during the year 1910.

GENERAL STATISTICS.

On the following pages will be found tables and a coloured chart showing the chief vital statistics of the administrative county and the monthly mortality from the chief zymotic diseases, &c., and at the end of the summary are tables relating to the vital statistics and other matters of interest in the various sanitary districts.

Tabulated Statement of the chief Vital Statistics of the Administrative County of Durham for the year 1910, compiled from the monthly returns supplied to the County Medical Officer by the Registrars.

1910.

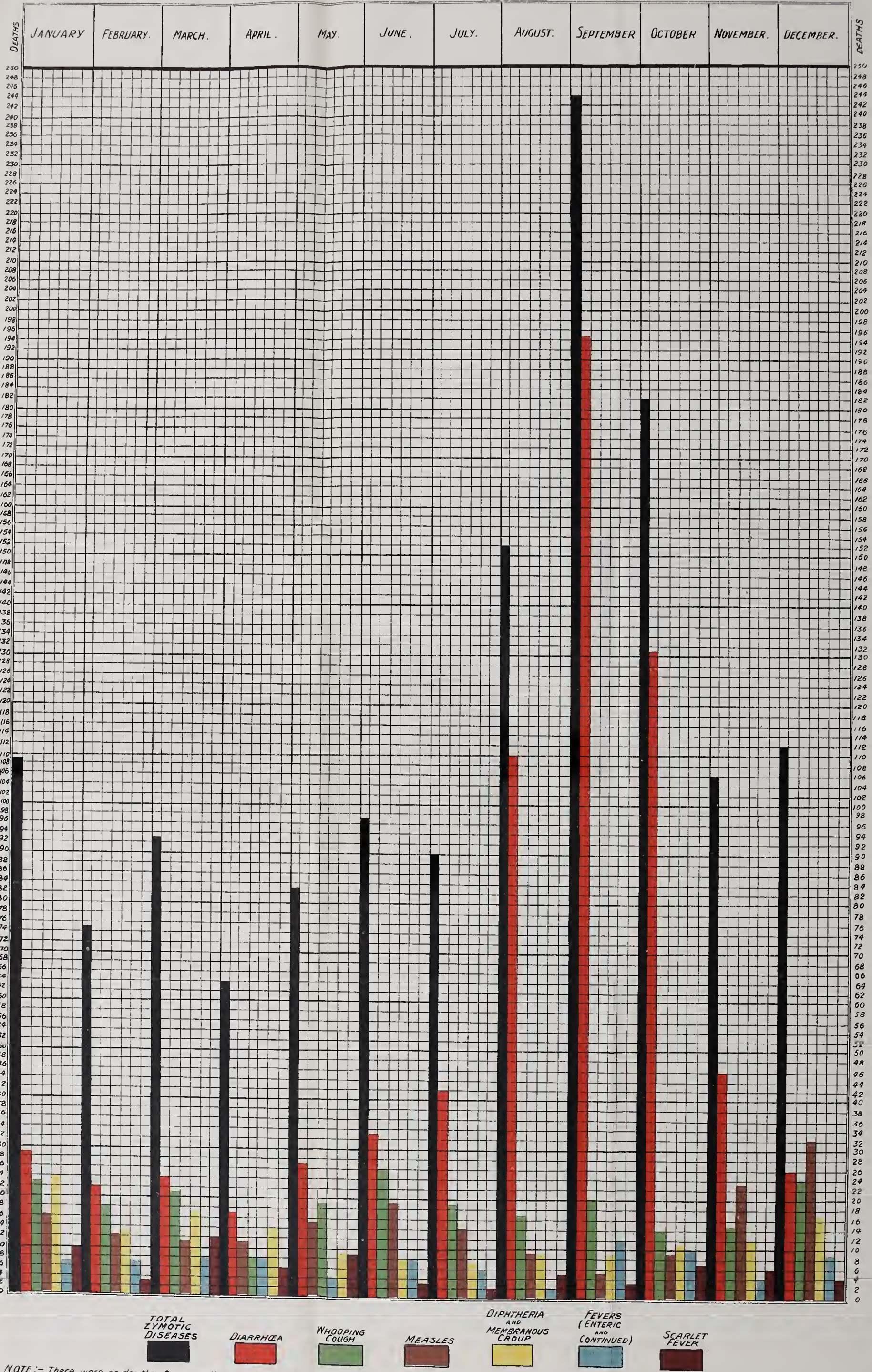
	* Population (Estimated 1910.)	Births.	Deaths.	Zymotic Deaths.	Per 1,000 Population.					Deaths under 1 year per 1000 Births.	Percentage of Uncertified Deaths to Total Deaths
					Birth- rate.	Death- rate.	Zymotic Death- rate.	Phthisis Death- rate.	Bronchiti Pneumonia & Pleurisy Death-rate.		
Boroughs ..	178,880	4,937	2,718	278	27·8	15·1	1·55	1·10	2·66	122	3·3
Other Urban Districts	343,130	11,670	4,774	500	34·0	13·9	1·45	0·84	2·20	122	4·2
Rural Districts ..	394,140	13,201	5,616	629	33·4	14·2	1·59	0·70	2·20	130	3·0
Administrative County	916,150	29,858	13,108	1,407	32·5	14·3	1·53	0·83	2·29	126	3·5
England and Wales...	...	897,100	483,321	35,736	25·1	13·5	1·01	...	...	106	1·4

* Revised in accordance with 1911 Census.

TABLE SHEWING THE NUMBER OF BIRTHS, DEATHS, AND DEATHS FROM THE CHIEF ZYMOTIC DISEASES
IN THE ADMINISTRATIVE COUNTY OF DURHAM, DURING EACH OF THE MONTHS OF 1910.

	Births.	Deaths.	Deaths under 1 year.	Total Zymotic Deaths.	Small- pox.	Scarlet Fever.	Diph- theria and Membran- ous Croup	Fevers (Enteric and Con- tinued).	Measles.	Whooping Cough.	Diarrhoea.
JANUARY ...	2399	1294	386	109	...	10	24	7	16	23	29
FEBRUARY ...	2284	1162	318	75	...	3	13	7	12	18	22
MARCH ...	2532	1115	298	93	...	12	17	8	11	21	24
APRIL ...	2568	1014	247	64	...	6	14	8	11	8	17
MAY ...	2594	1082	264	83	...	9	9	4	15	19	27
JUNE ...	2783	931	285	97	...	3	8	8	19	26	33
JULY ...	2451	991	255	90	...	2	7	6	14	19	42
AUGUST ...	2639	969	290	152	...	5	9	2	9	17	110
SEPTEMBER ...	2567	1132	386	244	...	3	9	12	5	20	195
OCTOBER ...	2465	1090	393	182	...	7	11	10	9	14	131
NOVEMBER ...	2247	1121	293	106	...	6	12	4	23	15	46
DECEMBER ...	2329	1207	357	112	...	4	17	9	32	24	26
TOTALS ...	29858	13108	3772	1407	...	70	150	85	176	224	702

CHART SHEWING THE NUMBER OF DEATHS DURING EACH MONTH OF 1910 FROM THE SEVEN CHIEF ZYMOTIC DISEASES



NOTE:- There were no deaths from smallpox during the year.

BOROUGH.

DARLINGTON.

JAMES LAWRENCE, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population	53,000	52,000
Birth-rate	27·39	29·05
Death-rate.. .. .	13·38	13·73
Zymotic death-rate	1·11	0·86
Phthisis death-rate	0·77	0·86
Total Tuberculosis death-rate	1·26	1·49
Respiratory diseases death-rate	1·64	1·71
Infant mortality-rate per 1,000 births	104	101

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications.. .. .	443	154
Smallpox	nil.	nil.
Scarlet fever	342	63
Diphtheria.. .. .	50	40
Fevers (Enteric, &c.)	24	29
Puerperal fever	2	3
Cases treated at hospital ..	408	112
Measles	(14)	(nil.)
Whooping cough	(11)	(23)
Diarrhoea	(23)	(7)

1911 Census Population—55,633.

Feeding and management of children (see page 11).

GENERAL SANITATION.

Water Supply, derived from the Tees and purified over sand filters, was satisfactory. The water was regularly analysed and was always found to be of excellent quality.

Sewerage.—Not mentioned.

Scavenging was satisfactorily done, but it is stated that “The “refuse tips in different parts of the area are a source of complaint “and a nuisance, and, as soon as a suitable site can be obtained, a “refuse destructor should be erected.”

Housing.—(a) New Houses: About 360 were built, making an increase of about 3,100 since 1901. (b) Insanitary Property: It is stated that the chief sanitary requirement is the substitution of water-closets for a number of ashpit privies. It is pointed out that the water carriage system is most desirable for the town, there being an abundant water supply and ample means for the disposal of the sewage.

Dairies and Cowsheds (25).—There are altogether 96 milk vendors in the district. Three nuisances, due to want of cleanliness of the cowsheds, were dealt with, though Dr. Lawrence reports that a “great improvement is taking place year by year, in the attention that is being given to the condition and cleanliness of the milk supply.”

Slaughter-houses (41) were regularly inspected, but it is pointed out that with such a large number to deal with it is very difficult to give the necessary supervision, and that the provision of a public slaughter-house in the near future is desirable. The majority of the slaughter-houses were kept clean. Two persons were prosecuted for slaughtering in unlicensed premises. Portions of the carcasses of beasts affected by tuberculosis were found on three occasions.

Offensive Trades.—The license to some premises where rancid fat was being rendered has been revoked. No other premises were the subject of complaint.

Food and Drugs.—158 were analysed. In three instances milk was found to be deficient in fat and samples of coffee (2), flour (2), whiskey (1), and gin (1) were found to be adulterated or below the standard. Warning letters were sent by the Town Clerk in all instances. In addition a considerable amount of unsound food was seized and destroyed and in one case proceedings were taken against the possessor of a large quantity of unsound rabbits and he was fined £3 and £2 4s. 0d. costs.

Factories and Workshops (396) and *Bakehouses* were the subject of 515 inspections, and 21 notices relative chiefly to defects of cleanliness and insufficient sanitary accommodation were served and complied with.

SANITARY REQUIREMENTS.

- 1.—A refuse destructor.
 - 2.—A public slaughter-house.
 - 3.—The adoption of the water-carriage system.
 - 4.—A sanatorium for the treatment of consumption.
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DURHAM.

A. M. VANN, M.R.C.S., Medical Officer of Health.

Vital Statistics.

	1910.	1909
Estimated Population	17,200	17,200
Birth-rate	25·81	25·23
Death-rate	15·93	16·62
Zymotic death-rate	1·28	0·69
Phthisis death-rate	1·16	1·04
Total Tuberculosis death-rate	2·03	2·35
Respiratory diseases death-rate	2·38	2·58
Infant mortality-rate per 1,000 births	117	135

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications.. .. .	46	66
Smallpox	nil	nil
Scarlet fever	18	34
Diphtheria	1	13
Fevers (Enteric, &c.)	6	6
Puerperal fever	nil	nil
Cases treated at hospital ..	28	36
Measles	(nil)	(3)
Whooping cough	(2)	(nil)
Diarrhoea	(17)	(9)

1911 Census Population—17,550.

Lowest recorded infant mortality rate for this district (see page 6).
 Health Visitor (see page 10). Vaccination (see page 18).

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company. Two samples were analysed and found satisfactory.

Sewerage.—The sewage disposal works are stated to be completed and in working order and the ventilation of the sewerage system has been improved by the provision of more vent shafts and Webb's lamps.

Housing.—(a) New Houses: 27 were built. (b) Insanitary Property: Under the Housing T.P., &c., Act, representations were made with respect to 13 houses all of which were closed, but six of the dwellings have since been rendered habitable. Thirty yards were paved, and water-closets were substituted for six ashpit privies. The district still contains 528 of these insanitary conveniences.

Nuisances.—1,132 were abated by the service of 100 formal and 1,148 informal notices.

Common Lodging Houses (8) were inspected regularly and notices served in five instances owing to want of cleanliness were complied with.

Cowsheds (9) are reported to be satisfactory.

Slaughter-houses (15) were inspected regularly and 12 notices were served to enforce cleanliness. It is again pointed out that the provision of a public slaughter-house is desirable.

Food and Drugs.—35 samples were taken and were found satisfactory.

Workshops (172) and *Bakehouses* (12) were the subject of 183 inspections and 41 notices, chiefly with respect to uncleanness, were served and complied with.

SANITARY REQUIREMENTS.

- 1.—A steam disinfecter.
- 2.—A public slaughter-house.

HARTLEPOOL.

J. RAWLINGS, M.R.C.S., Medical Officer of Health.

Vital Statistics

	1910.	1909.
Estimated Population ..	24,000	24,000
Birth-rate	27·08	25·83
Death-rate	14·45	13·37
Zymotic death-rate	1·25	0·91
Phthisis death-rate	0·62	0·58
Total Tuberculosis death-rate	1·29	1·50
Respiratory diseases death-rate	2·58	2·45
Infant mortality-rate per 1,000 births	160	106

Infectious Diseases—Cases and (Deaths)

	1910.	1909.
Total notification	76	68
Small-pox	nil	nil
Scarlet fever	59	52
Diphtheria	11	10
Fevers (Enteric, &c.)	2	nil.
Puerperal fever	1	nil.
Cases treated at Hospital ..	3	7
Measles	(nil.)	(15)
Whooping cough	(9)	(1)
Diarrhœa	(15)	(4)

1911 Census Population—20,618

GENERAL SANITATION.

Water.—The supply was satisfactory; two samples were analysed.

Sewerage.—The sewerage system acted fairly satisfactorily. It is recommended that the sea-water should be used for flushing purposes.

Housing.—(a) New Houses: two were built and occupied. (b) Insanitary Property: two houses were closed and 20 houses belonging to the Corporation are to be pulled down and workmen's dwellings erected on the site. Water-closets are in use throughout the district except in the case of a few outlying houses.

Nuisances.—473 were abated.

Common Lodging Houses were inspected regularly and were maintained in a fairly sanitary condition.

Dairies and Cowsheds.—There are 40 vendors of milk, but only two cowkeepers in the district. The milk supplied is reported to have been satisfactory.

Slaughter-houses (24).—New bye-laws have been adopted and in the case of 11 of the premises the licenses are renewed annually.

Food and Drugs.—76 samples were analysed and all were found satisfactory with the exception of one sample of milk, which was deficient in fat; it was proved that this deficiency was not due to the addition of water.

Factories and Workshops (41) were the subject of 152 inspections, and 23 nuisances were abated. Increased sanitary accommodation was provided in two cases.

SANITARY REQUIREMENTS.

Improvements to the housing accommodation.

JARROW-ON-TYNE.

J. M. NICOLL, M.B., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	34,815	34,815
Birth-rate	27·88	29·41
Death-rate	15·68	16·60
Zymotic death-rate	2·41	1·37
Phthisis death-rate	1·37	1·26
Total Tuberculosis death-rate	1·75	2·27
Respiratory Diseases death-rate	3·15	4·19
Infant mortality-rate per 1,000 births	126	148

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	199	126
Smallpox	nil.	nil.
Scarlet fever	61	27
Diphtheria	61	27
Fevers (Enteric, &c.)	2	16
Puerperal fever	nil.	2
Cases treated at hospital ..	52	28
Measles	(24)	(12)
Whooping cough	(24)	(20)
Diarrhœa	(22)	(5)

1911 Census Population—33,732

Lowest recorded death-rate for this district (see page 5).
Voluntary notification of phthisis in operation.

GENERAL SANITATION.

Water was satisfactorily supplied by the Sunderland and South Shields Water Company.

Sewerage.—The sewerage system for the most part acted efficiently, but ventilating shafts are required in some parts of the town and are to be erected.

Scavenging was done very satisfactorily by the contractors. The refuse is disposed of at sea.

Housing.—(a) New Houses: 7 self-contained and 5 tenemented (10 flats) houses were built. (b) Insanitary Property: Under the Housing T.P., &c., Act, 132 houses were inspected to 40 of which improvements were effected without the making of closing orders. Nineteen yards were cemented out, leaving very few bricked yards in the borough to be dealt with. There are no ashpit privies in the district, the majority of the houses being served by ash-closets.

Nuisances —1,719 were abated: 7 formal and 1,714 informal notices being served.

Streets.—Dr. Nicoll says:—“As regards our back streets, which “are all made with very roughly laid cobble stones, it is to be “regretted that none have been macadamized during the year. As “pointed out in previous reports, it is quite as necessary that the “back streets should be on the same sanitary level as the yards

“adjoining, and it is not of much benefit to the community to have
“cemented yards if the streets adjoining are in such a condition as
“to nullify any good effect to be got from the former. This is a
“matter which, from a health point of view, I think most import-
“ant, and should, especially in the more congested parts of the
“town, have the serious consideration of the Council.”

Milkshops (74) and Dairies (6).—Except in one instance all the milk is imported.

Common Lodging Houses.—As a result of last year’s report upon the lodging houses, two have been closed and “it is very probable
“that in two or three more, where the conditions are very unsatis-
“factory, similar steps will have to be taken.” One of the closed houses is to be remodelled.

Slaughter-houses (28) were inspected regularly. Except in one or two instances they are not considered to meet the requirements of the present day.

Food and Drugs.—55 samples were analysed, including 22 of milk, of which four were adulterated. Proceedings were taken against a milk vendor in one instance and the other offenders were cautioned.

Factories and Workshops (70) and Bakehouses (12) were the subject of 200 inspections. One bakehouse is being re-modelled and four nuisances (defective ventilation and defective sanitary accommodation) were remedied.

SANITARY REQUIREMENTS.

- 1.—More general adoption of the water-carriage system.
 - 2.—Macadamising of the back streets.
 - 3.—Hospital accommodation for diphtheria.
-

STOCKTON.

THOMAS HORNE, M.D., Medical Officer of Health.

<i>Vital Statistics</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1910.	1909.		1910.	1909.
Estimated Population ..	54,629	53,660	Total Notifications	350	312
Birth-rate	26·89	26·48	Smallpox	nil	nil
Death-rate	14·97	14·03	Scarlet Fever	203	136
Zymotic death-rate	1·17	1·24	Diphtheria	77	102
Phthisis death-rate	1·26	0·83	Fevers (Enteric, &c.)	34	24
Total Tuberculosis death-rate	2·12	1·97	Puerperal fever	3	2
Respiratory diseases death-rate	3·22	2·01	Cases treated at hospital ..	256	232
Infant mortality rate per			Measles	(13)	(31)
1,000 births	126	121	Whooping cough	(12)	(13)
			Diarrhoea	(21)	(18)

1911 Census Population—52,158.

Notification of Births Act in force. Treatment of consumption (see page 39).

GENERAL SANITATION.

Water is satisfactorily supplied by the Tees Valley Water Board, approximately one-half being drawn from upland gathering grounds and the other half from the river Tees. The water is passed through sand and gravel filters and increased attention is being given to filtration.

Sewerage.—1,095 lineal yards of sewers, with 13 manholes and five flushing shafts were laid. The sewage is discharged into the river Tees.

Scavenging.—The ashpit privies are scavenged during the night and the dry pans are emptied during the day. There has been an increase of refuse dealt with by the destructor and a slight decrease in the night soil supplied to farmers.

Housing (a) New Houses: 97 were built. A table is again included in the report showing that (i.) for the third year in succession every house built was supplied with a water-closet, (ii) that no new ashpit or pan privies were provided, (iii.) that the majority of the new houses were provided with fixed ash receptacles (patent tippers) and only a small number with moveable ashbins, and (iv.) that over 75 per cent. of the new houses were provided with a bath. (b) Insanitary Property: Two houses were closed as unfit for habitation and another house was demolished after notice. 215 water-closets were substituted for conveniences of other sorts. Dr. Horne

states that "Stockton must still perforce be classed as a midden-
 "privy town, conveniences of this nature, as yet, far outnumbering
 "water-closets. There is, in my opinion, much in the direction of
 "securing the water-carriage of excreta in place of the so-called
 "conservancy methods waiting to be done, and if the work could be
 "expedited I am convinced it would not fail to be advantageous to
 "the public health."

Dr. Horne presented to his Sanitary Committee a special report dealing with the arrangements for the removal of excretal matters at present existing in certain localities. There are now only five (unoccupied) houses in the borough where scavenging has to be performed through the house, and the owners have promised to provide these houses with water-closets before they are again let.

Nuisances.—4,186 were abated as the result of the service of 750 first notices, and 145 final notices.

Streets.—One front street and six back streets have been taken over by the Corporation, while six front streets and three back streets were sewered, levelled, and paved, &c. The public streets throughout the district are, with rare exceptions, stated to be in good order.

Common Lodging Houses (18) were the subject of 792 inspections. Legal proceedings were taken on two occasions against one keeper for breaches of the bye-laws, and fines were imposed. In consequence of complaints respecting the conduct of some common lodging houses, a police inspector was appointed inspector of common lodging houses.

Slaughter-houses.—During the year two slaughter-houses ceased to be used, reducing the number to 27, most of which are quite near to dwellings. Dr. Horne states:—"Many of them are anything
 "but models, which is not surprising when it is remembered that
 "they were not originally constructed for the purpose for which
 "they are now used. The inspectors are of opinion that a public
 "abattoir is a great desideratum, and with this opinion I am in full
 "agreement."

Milk-sellers (198) and *Cow-keepers* (32).—The cowsheds and premises of only one-half of the cow-keepers are situated within the borough, and all these premises were inspected and found to be fairly clean, though many of the premises are not ideal for the purpose of a milk business.

Food and Drugs.—41 samples were taken and submitted for analysis and of these 38 were found to be genuine. The vendors of the remaining three samples were warned by the Town Clerk and no proceedings were taken.

Factories (51), *Workshops* (229), *Workplaces* (71) and *Bakehouses* (51) were inspected on 299 occasions. Thirty-seven defects were found, and 34 of these were remedied, whilst H. M. Inspector sent in 11 notices of neglect or default in factories, &c. In seven instances these defects have been remedied, in two instances the premises are not now used as factories, and the remaining two were in hand at the end of the year.

Offensive Trades are conducted in 19 premises, and the bye-laws for their regulation are duly respected.

SANITARY REQUIREMENTS.

1. Substitution of the water-carriage system for conservancy methods of excrement disposal.

2. A public abattoir.

URBAN DISTRICTS.

ANNFIELD PLAIN.

T. BENSON, L.R.C.P., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1910.	1909.		1910.	1909.
Estimated Population	16,900	16,200	Total notifications	157	118
Birth-rate	33·96	36·04	Smallpox	nil	nil
Death-rate	12·07	13·45	Scarlet fever	121	80
Zymotic death-rate	0·94	1·60	Diphtheria	19	15
Phthisis death-rate	0·65	0·61	Fevers (Enteric, &c.)	6	12
Total Tuberculosis death-rate	1·53	1·29	Puerperal fever	nil	nil
Respiratory diseases death-rate	2·01	2·59	Cases treated at hospital ..	93	58
Infant mortality-rate per 1,000 births	109	113	Measles	(4)	(4)
			Whooping cough	(nil)	(nil)
			Diarrhoea	(9)	(13)
1911 Census Population—16,552.					

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—Extensions to the Dipton Sewage Disposal Works have been completed and satisfactory results are now obtained. Three new filters at the Kyo works will shortly be completed. It is reported that practically the whole of the district is well sewered.

Scavenging was satisfactorily done by contractors.

Housing.—(a) New Houses: 191 were built and of these 185 were self-contained and 6 were tenemented; 55 contained five or more rooms and the remainder consisted of three and four-roomed houses. Seventy-six of these houses were provided with water-closets. (b) Insanitary Property: 22 houses were closed, the majority being wooden erections. Under the Housing T.P., &c., Act, 104 dwellings were inspected and with respect to 93 representations were made to the District Council with a view to obtaining closing orders. Closing orders were obtained with respect to 20 houses, six of which have since been rendered fit for human habitation. It

is reported that extensive repairs have been made to Beattie's Houses, Wilkinson's Buildings, and Dowlais Cottages. At Edward's Cottages two houses have been closed, and similar action is to be taken with respect to Weston's Houses and eight of the Dipton Wood Houses. The district still contains 1,376 privy ashpits. During the year 23 of these insanitary conveniences were abolished.

Nuisances.—170 notices were served.

Common Lodging Houses were reported to be kept in fairly good condition.

Milk Supply.—There are 17 cow-keepers and 24 milk vendors in the district, but no information is given respecting the dairies and byres.

Slaughter-houses (10) were maintained satisfactorily.

Factories (9) and *Workplaces* (22) were inspected on 62 occasions and found satisfactory.

SANITARY REQUIREMENTS.

Improvements to housing accommodation.

BARNARD CASTLE.

ALFRED H. SEVIER, M.B., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population	4,606	4,572
Birth-rate	24·31	21·21
Death-rate	15·41	14·65
Zymotic death-rate	0·43	0·65
Phthisis death-rate	1·30	1·53
Total Tuberculosis death-rate	2·17	1·75
Respiratory diseases death-rate	1·30	1·53
Infant mortality-rate per 1,000 births	80	92

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	28	21
Smallpox	nil	nil
Scarlet fever	4	2
Diphtheria	15	16
Fevers (Enteric, &c.)	1	1
Puerperal fever	nil	nil
Cases treated at hospital ..	nil	3
Measles	(nil)	(1)
Whooping Cough	(nil)	(nil)
Diarrhoea	(nil)	(1)

1911 Census Population—4,757.

Lowest zymotic death-rate in the county (see page 16).

GENERAL SANITATION.

Water Supply.—This was adequate and satisfactory. It is recommended that the “pipe track” from the spring to the reservoir be overhauled.

Sewerage.—The construction of a new sewer for the lower part of the town is to be undertaken. The sewage farm worked efficiently.

Housing (a) New Houses: 6 were built. (b) Insanitary Property: It is mentioned that “A good many defects requiring attention and improvement” have been reported to the Council, and closing orders were recommended with respect to 41 tenements.

Nuisances.—78 were reported and remedied.

Dairies (4) were inspected periodically and found fairly satisfactory.

Slaughter-houses (9) were inspected regularly and improvements made in several instances. Applications for the registration of other **slaughter-houses were received but not entertained.**

Factories and Workshops are reported to have been maintained satisfactorily in most instances.

SANITARY REQUIREMENTS.

1.—A new low-level sewer.

2.—Improvements to cow-sheds and slaughter-houses.

3.—Provision of a disinfecter capable of dealing with large articles.

BENFIELDSIDE.

WM. ALLEN, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1900.
Estimated Population	8,000	7,700
Birth-rate	30·00	33·37
Death-rate	15·87	16·23
Zymotic death-rate	0·87	1·30
Phthisis death-rate	0·87	1·42
Total Tuberculosis death-rate	2·00	2·85
Respiratory diseases death-rate	2·00	1·56
Infant mortality-rate per 1,000 births	112	81

1911 Census Population—8,355

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notification	30	31
Smallpox	nil.	nil
Scarlet fever	5	15
Diphtheria	10	2
Fevers (Enteric, &c.)	3	2
Puerperal fever	5	nil
Cases treated at hospital ..	9	13
Measles	(nil)	(2)
Whooping Cough	(1)	(3)
Diarrhœa	(6)	(5)

GENERAL SANITATION.

Water was supplied satisfactorily by the Weardale and Consett Water Company.

Sewage Disposal.—The extensions to the sewage disposal works are still under consideration.

Scavenging is done by contractors.

Housing.—(a) New Houses: 21 were built. (b) Insanitary Property: Dr. Allen says:—"The rebuilding of the Bottle Bank area and the other congested portions of your district would be a considerable move in the direction of improved sanitation. Ten years ago, the Bottle Bank type of house prevailed in the neighbouring Urban District of Leadgate, and since they were rebuilt on scientific lines the health of the district has improved enormously." The district still contains 937 ashpit privies. During the year ashpit privies were substituted by ash-closets (52) and water-closets (13), and in five instances ash-closets were substituted by water-closets.

Nuisances.—139 informal notices were served with satisfactory results.

Dairies and Cowsheds were maintained satisfactorily.

Slaughter-houses were maintained satisfactorily except in one instance, in which case it was necessary to serve a notice for the remedying of the defects.

Factories and Workshops were inspected on 56 occasions and were found satisfactory.

SANITARY REQUIREMENTS.

1.—A public slaughter-house.

2.—Inspection of dairy cows by a veterinary surgeon.

3.—Demolition or the reconstruction of houses of the “Bottle Bank” type.

BISHOP AUCKLAND.

T. A. McCULLAGH, M.R.C.S., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population.. ..	13,478	13,306
Birth-rate.. .. .	29.90	31.41
Death-rate	13.65	17.13
Zymotic death-rate	0.44	0.90
Phthisis death-rate	0.88	1.12
Total Tuberculosis death-rate	1.85	1.87
Respiratory Diseases death-rate	1.92	2.40
Infant mortality-rate per 1,000 births	99	117

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	73	89
Smallpox	nil	nil
Scarlet fever	14	27
Diphtheria	35	18
Fevers (Enteric, &c.)	6	18
Puerperal fever	nil	nil
Cases treated at hospital ..	7	16
Measles	(nil)	(nil)
Whooping cough	(nil)	(2)
Diarrhoea.. .. .	(4)	(6)

1911 Census Population—13,839.

GENERAL SANITATION.

The Water Supply was satisfactory. It is mentioned that there have been instances of contamination of the river by sewage and other matters above the intake, which necessitates the keeping of the filter beds in perfect order.

Scavenging was well done by the Council's own workmen. The night-soil is disposed of on a tip near Fylands Bridge.

Housing.—(a) New Houses: 109 were erected and 87 occupied. (b) Insanitary Property: Dr. McCullagh says:—“A good deal of work has been done to improve some of the more defective houses, but many of them are so hopelessly dilapidated and decayed, that it seems impossible to make them really habitable. Some improvements have been made at Town Head, spouting, ceilings repaired,

“etc., in a few houses. Nothing has been done at Skeleton Row. Improvements to the old white houses at the bottom of Newton Cap have been made. In Bankwell Yard, Back Bondgate, Chandler’s Yard, Wilkinson’s Yard, Page’s Yard, Finkle Street, Jock’s Row, Dial Stob Hill, Thompson Street, Carr’s Place and Wear Chare improvements have been carried out, but at the best they are only palliatives. Under the Town Planning Act, I shall have to make a house to house inspection this year, and prepare a complete list of all sanitary requirements, and make recommendations.” The district still contains 764 ashpit privies. During the year ashpit privies were substituted by water-closets (41), and ash-closets (30).

Nuisances.—125 formal and 50 informal notices were served, and 85 nuisances were abated.

Common Lodging Houses (9) were maintained satisfactorily.

Dairies and Cowsheds.—There are eight cow-keepers in the district, and their byres are fairly satisfactory.

Slaughter-houses (11) were kept clean.

Factories, Workshops and Workplaces (71) were visited in 63 instances and defective conditions were found and remedied in 7 premises.

SANITARY REQUIREMENTS.

Improvements to the housing accommodation.

BLAYDON.

H. MORRISON, M.B., B.S., B.Hy., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population	29,200	28,000
Birth-rate	37·70	40·32
Death-rate	14·79	13·50
Zymotic death-rate	3·01	1·53
Phthisis death-rate	0·85	1·14
Total Tuberculosis death-rate	1·26	1·82
Respiratory diseases death-rate	2·29	1·35
Infant mortality-rate per 1,000 births.. .. .	147	117

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	219	277
Smallpox	nil	nil
Scarlet fever	130	184
Diphtheria	49	54
Fevers (Enteric, &c.)	20	20
Puerperal fever	nil	nil
Cases treated at hospital ..	135	187
Measles	(14)	(5)
Whooping cough	(9)	(1)
Diarrhoea	(54)	(22)

1911 Census Population—31,148.

High birth-rate (see page 4). Highest zymotic death-rate in the county (see page 16).

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett and Newcastle and Gateshead Water Companies to the greater part of the district. There are, however, in the district houses supplied by wells (60), springs (109), and colliery workings (22).

Sewerage.—The outfalls near Bridge Street and Blaydon Railway Station require attention.

Scavenging.—The contractors are reported to have done the work very well, a great improvement having been effected during the past year.

Housing.—A great scarcity of houses exists in the district, and it is reported that alterations to insanitary property are delayed by lack of accommodation for the displaced tenants. Under the Housing T.P., &c., Act, 413 houses were inspected and closing orders were made with respect to 28 houses, 19 of which have since been made habitable. In four instances demolition orders were made.

Nuisances.—1,676 were abated.

Common Lodging Houses (2) were served with notices requiring cleansing.

Slaughter-houses (19) were served with notices to enforce cleanliness (2) water supply (1) and the provision of hunger house (1).

Dairies and Milkshops.—Notices were served to enforce cleanliness (4) and reconstruction of premises (1).

Factories and Workshops were inspected on 79 occasions, and nuisances arising from defective sanitary accommodation were remedied.

SANITARY REQUIREMENTS.

- 1.—Additional housing accommodation.
 - 2.—Provision of water-closets in all houses.
 - 3.—Improvements to the Blaydon outfalls.
 - 4.—Revision of the building bye-laws.
 - 5.—A Health Visitor.
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BRANDON AND BYSHOTTLES.

HENRY SMITH, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population	18,674	18,297
Birth-rate	31·80	34·86
Death-rate	13·06	14·42
Zymotic death-rate	1·39	1·09
Phthisis death-rate	0·69	0·87
Total Tuberculosis death-rate	1·06	1·25
Respiratory diseases death-rate	2·62	2·51
Infant mortality - rate per 1,000 births	143	123

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	100	326
Smallpox	nil	nil
Scarlet fever	60	262
Diphtheria	13	26
Fevers (Enteric, &c.)	17	28
Puerperal fever	nil	nil
Cases treated at hospital ..	42	109
Measles	(nil)	(nil)
Whooping cough	(1)	(2)
Diarrhœa	(13)	(10)

1911 Census Population—17,668.

Notification of Births Act in force since 1909.

GENERAL SANITATION.

Water.—The Weardale and Consett Water Company supply the whole district with the exception of a few farms and isolated places.

Sewerage.—At New Brancepeth Colliery 600 yards of new sewers with 14 manholes have been substituted for open channels. At Esh Winning 240 yards of 6 in. sewer and five manholes were laid. The sewage disposal works for the most part have acted efficiently. Extensions are being made to the Littleburn works.

Scavenging was fairly satisfactorily done by 13 contractors, and Dr. Smith states that the substitution of ash-closets for midden privies is greatly facilitating the work. The refuse is placed on the Council's tips or is disposed of as manure.

Housing.—(a) New Houses: Plans for 114 new dwellings were approved, 69 being erected and 54 occupied. The erection of 30 five-roomed houses in Brandon Colliery is in progress. (b) Insanitary Property: One house was closed. Eight houses have been improved at New Brancepeth, 10 back-to-back dwellings at Waterhouses have been converted into through houses, and the lighting and ventilation of 14 others have been improved. Good progress was made with the abolition of ashpit privies, 367 ash closets being erected this year, making a total of 1,357 for the past five years. 100 yards were cemented out.

Nuisances.—749 were abated; 341 notices were served. 26 cases of overcrowding were dealt with and abated in 13 instances. The report states that there is still much overcrowding in the district.

Streets.—Two streets were made.

Dairies and Cowsheds (34) were all inspected. Four were deficient in respect of cleanliness; one byre was defective generally and another had a defective water supply. Notices were served in all instances. New regulations prescribing a minimum of 600 cubic feet per cow have been adopted.

Slaughter-houses were maintained satisfactorily. Reference is again made to the fact that many of the slaughter-houses are undesirably close to dwelling houses.

Factories, Workshops (22) and *Bakchouses* (1) were inspected on 32 occasions. Nuisances due to want of cleanliness (2), insufficient drainage of floors (1), and insufficient sanitary accommodation (3) were detected and remedied.

SANITARY REQUIREMENTS.

1.—Additional hospital accommodation.

2.—Provision of sewers at Brandon Colliery.

CHESTER-LE-STREET.

D. DUNCAN, M.B., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population..	15,651	15,174
Birth-rate	30·98	33·37
Death-rate	12·77	12·98
Zymotic death-rate..	1·78	1·84
Phthisis death-rate ..	0·83	0·39
Total Tuberculosis death-rate	1·46	0·98
Respiratory diseases death-rate	1·59	2·04
Infant mortality-rate per 1,000 births	107	115

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	36	74
Smallpox	nil.	nil.
Scarlet fever	5	49
Diphtheria.. .. .	21	8
Fevers (Enteric, &c.)	2	10
Puerperal fever	1	nil.
Cases treated at Hospital ..	1	23
Measles	(nil)	(5)
Whooping Cough	(9)	(6)
Diarrhœa	(16)	(10)

1911 Census Population—14,713.

GENERAL SANITATION.

Water is supplied by the Weardale and Consett Water Company.

Sewerage.—The District Council are considering the construction of sewage tanks on land near the highway at the bottom of Burnt House Bank, but the scheme is objected to by the County Council as being too near the highway. The effluent sewer from the Chester-le-Street Sewage Farm has been damaged by a pitfall, but a new and improved effluent pipe is being laid. “This will improve the farm but the land is still overworked and sewage sick and in the near future your Council will have to provide additional bacteria tanks.” The sewage from the village of Chester Moor is treated by a system of liquefying tanks and double contact filters. The material in four of the fine and three of the coarse filters has been screened and washed and 50 tons of new slag have been added. One-third of an acre of new land has been acquired and six sludge lagoons formed thereon. The old open sewers at Chester Moor are being removed and good cement footpaths with channel are being provided.

Scavenging.—In the Chester-le-Street and Chester Moor wards this work is done by the Council’s own workmen, but in the Pelton Fell ward it is performed by contractors.

Housing.—(a) New Houses: 130 have been built and occupied. (b) Insanitary Property: Six houses at Story’s Buildings were demolished by the owners, and 14 houses in Elm Street, Chester Moor, have been provided with a large window in the scullery, and the step ladders leading to the bedrooms have been replaced by staircases, and the houses have been improved in other respects. At High Cross Rows, Pelton Fell, 32 single houses have been converted into 16 four-roomed houses with enclosed cemented yards, ash-closets, etc., and a cement footpath laid in front. Eight back-to-back houses at High Howlett are being altered into four four-roomed dwellings, and the wood-lined house in Front Street is being closed. The three houses at Gilbert’s Corner, which were found to be unfit for habitation, have been closed. Reference is again made to the need for improvement to the houses and their out-offices in Grange Terrace and a number of other streets. It is understood that the

Colliery Company intend to provide the Grange Terrace houses with enclosed cemented yards, ash-closets, and coal-houses forthwith. 143 ashpit privies were converted into ash-closets and 15 into water-closets, and six ash-closets were converted into water-closets. Four water-closets were substituted for two open ashpit privies at Chester Moor schools.

Streets.—Improvements have been carried out at Morningside Terrace, Edward Square, Ernest Terrace, Lynn Street, and Thomas Street, in Chester-le-Street Ward; and Lime Street, Pine Street, and Union Place in Chester Moor ward.

Common Lodging Houses (2) are maintained fairly clean but are overcrowded, while the outdoor accommodation for the one in Market Place ought to be improved.

Dairies (7) and *Cowsheds and Milkshops* (4).—The cowshed at Red Rose Farm is to be closed and notice has been served to close Thompson's dairy, as the premises are unsuitable, insanitary, and overcrowded. Certain improvements have been carried out to other farms, Chester Moor Farm having been altered into a model dairy farm.

Slaughter-houses (9) are stated to be good (3), fairly good (2), and not good (4), and they are occasionally visited by the Inspector at slaughtering times.

Factories (6), *Workshops* (34) and *Workplaces* (30) were frequently inspected, and two defects were found and remedied.

SANITARY REQUIREMENTS.

1.—The conversion of ashpit privies at Pelton Fell, detailed in the report, into ash-closets.

2.—The inclusion of the district in a joint hospital district.

3. The provision of hospital accommodation for cases of small-pox.

CONSETT.

A. D. M. MACINTYRE, M.B., Medical Officer of Health.

Vital Statistics.

	1910.	1909
Estimated Population	11,349	11,157
Birth-rate	28·55	28·86
Death-rate	13·92	16·31
Zymotic death-rate	0·88	1·25
Phthisis death-rate	1·49	0·89
Total Tuberculosis death-rate	1·76	1·43
Respiratory diseases death-rate	2·64	3·04
Infant Mortality-rate per 1,000 births	114	121

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	19	30
Smallpox	nil	nil
Scarlet fever	7	15
Diphtheria	6	2
Fevers (Enteric, &c.)	nil	nil
Puerperal fever	nil	nil
Cases treated at hospital ..	5	1
Measles	(4)	(4)
Whooping cough	(nil)	(6)
Diarrhoea	(6)	(4)

1911 Census Population—11,209.

Lowest recorded death-rate for this district (see page 5).

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—The sewage was satisfactorily treated at Stannifordam and Crookhall. A new sewer, 1,118 yards long with 15 manholes, has been laid between Delves Lane and the Crookhall works, and a scheme has been prepared for connecting Templetown and the Blackhill portion of the district with the Stannifordam works.

Scavenging was satisfactorily done by the Council's workmen, but Dr. Macintyre says:—"So long, however, as the ashpit privy exists the most careful scavenging cannot fail to afford opportunities from time to time for the liberation and dissemination of the most noxious and deadly germs of disease."

Housing.—(a) New Houses: Plans for 84 new houses were passed and 77 were occupied. It is recommended that water-closets should be provided to all new houses. (b) Insanitary Property: 20 cottages in the Company Rows have been reconstructed and are now occupied, and it is recommended that the District Council should press the owners to reconstruct the remaining houses without delay. The congested area in Pitt Street and Trafalgar Street is now likely to be proceeded with as plans have been received. Some back-to-back houses in Raglan Street and Havelock Street are being dealt with.

Nuisances.—Eight formal and 80 informal notices were served and the latter were complied with.

Streets.—Over 16,000 superficial yards of tar macadam were laid in 12 streets and other streets are being similarly improved. It is recommended that when the reconstruction of the houses in the Company Rows is completed the streets should be imperviously paved.

Common Lodging Houses (4) were maintained satisfactorily. Notices were served requiring the substitution of single beds for all double ones.

Dairies and Cowsheds (6).—In four instances the byres are temporary wooden erections, and notices have been served requiring the owners to comply with the new regulations.

Slaughter-houses (12) were maintained satisfactorily.

Factories and Workshops were inspected regularly and found in good order.

SANITARY REQUIREMENTS.

1.—Reconstruction of the remaining cottages in the Company Rows, and making of the streets with impervious material.

2.—Provision of water-closets in new houses.

3.—Improvements to cowsheds.

4.—Adoption of the Notification of Births Act.

CROOK.

A. MACKAY, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population	12,000	11,800
Birth-rate	33·91	34·91
Death-rate	12·75	12·96
Zymotic death-rate	0·75	0·92
Phthisis death-rate .. .	0·50	1·10
Total Tuberculosis death-rate	0·83	1·86
Respiratory diseases death-rate..	3·41	2·37
Infant mortality-rate per 1,000 births	93	92

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications.. .. .	137	88
Smallpox	nil	nil
Scarlet fever	114	73
Diphtheria	3	2
Fevers (Enteric, &c.)	12	5
Puerperal fever	nil	nil
Cases treated at hospital ..	72	42
Measles	(nil)	(1)
Whooping Cough	(nil)	(nil)
Diarrhœa	(nil)	(7)

1911 Census Population—12,310.

GENERAL SANITATION.

Water Supply was satisfactory.

Sewerage.—A scheme has been prepared for dealing with the sewage at Stanley.

Scavenging was done satisfactorily by the contractors, ash-closets and privies being emptied and disinfected once a week. The refuse is disposed of to farmers for manure.

Housing.—(a) New houses: 55 self-contained houses were built and occupied. (b) Insanitary Property: The work done during the year included the substitution of 157 ash-closets and nine water-closets for midden privies, the cementing of several yards, and improvements to drainage and spouting. Dr. Mackay refers to the large number of back-to-back houses in the district, but is of the opinion that only “a few of the worst can be dealt with in the early future as houses are scarce and rents high.” Reference is again made to the number of midden privies in the district, and it is recommended that some systematic action be taken for the abolition of these insanitary conveniences. Dr. Mackay recommends that “In Crook itself, especially in connection with the larger houses, the water-carriage system should be adopted.”

Nuisances.—241 were abated, 116 informal notices being served.

Streets.—Two back streets and one cross street were made.

Dairies and Cowsheds.—Some of the cowsheds are reported to be “wooden erections, defective in ventilation and other respects.” Another byre (Ridley’s) has no water supply.

Slaughter-houses (13) are registered and were inspected regularly. Premises in Hope Street were closed and others in Rosemount Terrace were cemented out. Dr. Mackay again refers to the desirability of providing a public slaughter-house,

Factories (14) and *Workshops* (24) were inspected on 38 occasions and one notice was served owing to want of cleanliness. Attention is again drawn to some unsatisfactory premises used as a lemonade factory.

SANITARY REQUIREMENTS.

- 1.—Making the remainder of the back streets.
- 2.—Repairing roads in the colliery villages.
- 3.—Cementing of yards in Crook.
- 4.—Abolition of midden-privies in Crook.
- 5.—Frequent flushing of drains and washing of yards, especially during dry weather.

FELLING.

WM. E. PEACOCK, M.D., B.Hy., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	28,323	27,622
Birth-rate	31.95	29.57
Death-rate	13.02	13.97
Zymotic death-rate ..	1.02	1.33
Phthisis death-rate ..	0.70	1.08
Total Tuberculosis death-rate	1.23	2.02
Respiratory diseases death-rate	2.61	2.75
Infant mortality-rate per 1,000 births	110	143

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	137	279
Smallpox	nil.	nil.
Scarlet fever	76	216
Diphtheria	36	21
Fever (Enteric, &c.)	7	12
Puerperal fever	5	1
Cases treated at Hospital ..	nil.	nil.
Measles	(3)	(13)
Whooping cough	(7)	(3)
Diarrhoea	(13)	(11)

1911 Census Population—25,020

Lowest recorded death-rate for this district (see page 5).

GENERAL SANITATION.

Water was satisfactorily supplied by the Newcastle and Gateshead Water Company.

Sewerage.—The sewage is discharged directly into the Tyne. The rubble sewer in High Street is to be replaced, and Reservoir Street, Wardley Colliery, which at present relies on an open channel, requires a new system of drainage. The rest of the district is well sewered.

Scavenging was well done by the Council's workmen. Rather less than half the refuse (about 8,000 loads) was dealt with by the destructor.

Housing (a) New Houses: 29 self-contained and 31 tenemented (flats) houses were built. (b) Insanitary Property: Under the Housing T.P., &c., Act, 54 houses were inspected and as a result closing orders were made with respect to 20 of them and four were voluntarily closed by the owners. Defects in 14 houses were remedied under Section 15 of the Act and the remainder of Dixon Terrace, Felling, and Dixon's Buildings, Windy Nook, are in hand without the issuing of closing orders. At Wardley Colliery, in Smokey Row, all the houses have been provided with sculleries, and similar improvements are required in Pump Row and Sunderland Terrace. At Heworth Lane improvements have been made to Wade's Buildings and Wood Houses. There still remain 62 midden privies in the district. Twenty-eight midden privies were replaced by ash-closets or water-closets.

Nuisances.—Eight formal and 289 informal notices were served and complied with. Dr. Peacock calls attention to the habit of spitting on the pavement indulged in by men congregating at certain street corners in the town, and he points out the danger of spreading consumption by this disgusting habit.

Dairies and Cowsheds (18) were reported to be maintained satisfactorily. Bye-laws to include the provision of 600 cubic feet of air space per cow are under consideration.

Slaughter-houses (19).—The District Council have made provision for the immediate removal of the offal, but it is reported that several of the slaughter-houses are too near to dwellings and the desirability of providing a public slaughter-house is again referred to.

Factories (9) and *Workshops and Workplaces* (52) were inspected upon 61 occasions and were found satisfactory.

SANITARY REQUIREMENTS.

The provision of a public slaughter-house.

HEBBURN.

A. M. G. WALKER, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population	23,577	23,577
Birth-rate	30·07	33·75
Death-rate	13·14	14·25
Zymotic death-rate	1·65	1·82
Phthisis death-rate	1·10	1·14
Total Tuberculosis death-rate	1·56	1·61
Respiratory diseases death-rate	2·66	1·56
Infant mortality-rate per 1,000 births	112	126

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	167	133
Smallpox	nil	nil
Scarlet Fever	62	50
Diphtheria	35	28
Fevers (Enteric, &c.)	3	16
Puerperal fever	1	nil
Cases treated at hospital	85	77
Measles	(5)	(14)
Whooping cough	(14)	(12)
Diarrhœa	(14)	(8)

1911 Census Population—21,766.

Lowest recorded infant mortality-rate for this district (see page 6).
 Voluntary notification of phthisis in operation.

GENERAL SANITATION.

Water was satisfactorily supplied by the Sunderland and South Shields Water Company.

Sewerage.—The provision of ventilation to all blind ends of the sewers is receiving attention.

Scavenging was done fairly satisfactorily but there are still difficulties in the removal of the refuse to sea in hoppers. Many tons of the refuse are deposited on land in the immediate vicinity of the town, and to avoid this it is recommended that a destructor be erected or a quay, from which the refuse can be despatched to sea, provided.

Housing.—(a) New Houses: 10 were built. (b) Insanitary Property: Under the Housing T.P., &c., Act, 32 houses were inspected and closing orders were made in 30 instances, while defects in two houses were remedied without the making of closing orders. Eight houses which were closed have since been rendered fit for habitation. The properties dealt with were situated in Collins' Lane and Riverside Cottages. During the year 34 ashpit privies were replaced by 58 ash-closets and three water-closets, and eight ash-closets by 11 water-closets. The more general introduction of the water-carriage system is again recommended. The district still contains 86 ashpit privies which are for the most part situated in the East Ward.

Nuisances.—223 were abated by the service of 16 formal and 231 informal notices.

Streets.—The new streets have been made with tar macadam and a number of the back lanes have been relaid with the same material. The improvement effected by paving with tar macadam the front and back street at Collins' Lane is especially marked.

Common Lodging House (1) was periodically inspected and found satisfactory.

Dairies and Cowsheds (6) and *Milkshops* (36).—The byres are reported to scarcely come up to modern requirements, which are: "sufficient light, ventilation, good paving, and channelling, and "above all a wholesome and sufficient supply of water for cleansing "and drinking purposes." It is also pointed out that in the milkshops the milk should be stored in proper vessels now sold for this purpose.

Slaughter-houses (12) were maintained fairly satisfactorily, but the desirability of a public slaughter-house is again insisted upon.

Factories and Workshops (11) were the subject of 33 inspections and were found satisfactory.

SANITARY REQUIREMENTS.

1.—The adoption of the Notification of Births Act, 1907.

2.—The appointment of a Health Visitor or Nurse to assist with the Notification of Births Act, also to visit the homes of children reported to the Health Department by the School Medical Officer, to encourage and teach the parents their duties towards their children and homes.

3.—The erection of a quay and the purchasing of a hopper to convey refuse to sea, or the erection of a destructor for the disposal of the same.

4.—Public Abattoir.

5.—Public Baths.

6.—More Common Lodging Houses.

7.—The early adoption of the L.G.B. Model Bye-laws.

HETTON-LE-HOLE.

J. ADAMSON, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	15,000	14,800
Birth-rate	38·00	36·62
Death-rate	12·73	13·85
Zymotic death-rate	0·66	1·75
Phthisis death-rate	0·80	0·40
Total Tuberculosis death-rate	1·60	1·01
Respiratory diseases death-rate	1·60	2·09
Infant mortality-rate per 1,000 births	110	112

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	78	52
Smallpox	nil	nil
Scarlet fever	34	24
Diphtheria	16	1
Fevers (Enteric, &c.)	13	8
Puerperal fever	1	nil
Cases treated at hospital	40	7
Measles	(nil)	(11)
Whooping Cough	(nil)	(nil)
Diarrhoea	(9)	(12)

1911 Census Population—15,678.

GENERAL SANITATION.

Water.—The supply was satisfactory.

Sewerage.—The sewers are reported to be in good order, though occasionally disturbed by pit workings, and are regularly flushed.

Scavenging was satisfactorily done by the contractors.

Housing.—(a) New Houses: 143 have been built and occupied during the last two years. (b) Insanitary Property: The report refers briefly to inspections made by the sub-committees appointed by the Council, who visited Easington Lane, Hetton, and Hetton Downs Wards. There appear to be a number of houses with very defectively paved surroundings and a congested area in Back Market Street requires attention. It was decided by the District Council to commence a systematic inspection of the Easington Lane Ward.

Streets.—Three roads were made during the year, and attention is called to the urgent need of making certain streets in Easington Lane and Hetton Wards.

Common Lodging Houses (2) are reported to be in need of repair.

Dairies and Cowsheds were inspected regularly, and improvements were needed with respect to pavement and cleanliness of surroundings. A few byres do not possess the requisite air space. It is recommended that the tuberculin test should be systematically applied to the dairy cows in the district.

Slaughter-houses (16) received supervision. The desirability of providing a public slaughter-house is again referred to.

Factories and Workshops are not mentioned.

SANITARY REQUIREMENTS.

- 1.—Improvements to the housing accommodation.
- 2.—Making of the back streets.
- 3.—Improvements to the Common Lodging Houses.

HOUGHTON-LE-SPRING.

D. S. PARK, F.R.C.S., Medical Officer of Health.

<i>Vital Statistics.</i>				<i>Infectious Diseases—Cases and (Deaths).</i>			
	1910.	1909.			1910.	1909.	
Estimated Population ..	10,250	9,800		Total notifications ..	85	61	
Birth-rate	29·17	39·08		Smallpox	nil	nil	
Death-rate	17·85	12·96		Scarlet fever ..	54	12	
Zymotic death-rate ..	0·68	1·22		Diphtheria	19	14	
Phthisis death-rate ..	0·87	1·12		Fevers (Enteric, &c.) ..	5	22	
Total Tuberculosis death-rate	1·36	1·93		Puerperal fever ..	nil	nil	
Respiratory diseases death-rate	3·90	2·14		Cases treated at hospital ..	30	20	
Infant mortality-rate per 1,000 births	160	99		Measles	nil	(5)	
				Whooping cough ..	(3)	(2)	
				Diarrhoea	(2)	(nil)	

1911 Census Population—9,753.

Highest death-rate in the county (see page 5). High infant mortality rate (see page 6).

GENERAL SANITATION.

Water.—Houghton Colliery furnishes the greater part of the district, but there is a supplementary supply obtained from the Sunderland and South Shields Water Company. A new main was laid between Pit Row and High Hill Side and water was laid into the houses at Hopper Square.

Sewerage.—Subsidences continue to cause trouble at the works and also considerable damage to several sewers. Temporary measures are being adopted to deal with the defects as more subsidences are anticipated.

Scavenging was done by contractors, and complaints regarding this work were received. It has been resolved that water-closets are to be substituted for ash-closets or ashpit privies in yards containing insufficient space and in all yards where there is no proper access for the scavengers' cart.

Housing.—(a) New Houses: 19 houses were erected and 17 occupied. (b) Insanitary Property: Wood Houses, Colliery Row, have been improved by the provision of impervious pavement, but an amount of property, notably at Pit Row, has defective spouting. The district still contains 1,208 ashpit privies. During the year 40 of these insanitary conveniences were converted into ash-closets.

Nuisances.—454 were abated by the service of five formal and 499 informal notices.

Streets.—It is stated that a number of streets are being made and several more are in hand.

Common Lodging Houses (3) were maintained satisfactorily.

Dairies and Cowsheds.—Of the three dairy farms reported last year to have defective water supply—a public supply has been laid on to Field House Farm, the spring at White House Farm has been protected and a supply from the Hetton Coal Company has been obtained for Bradley's farm. The byres in all instances are reported to have been well kept.

Slaughter-houses.—Attention is again drawn to the fact that slaughtering is still permitted in certain shops. A portion of a tuberculous beast was seized and condemned.

Factories and Workshops were found satisfactory except in two instances where there was insufficient closet accommodation. These defects are to be remedied.

SANITARY REQUIREMENTS.

The proper making up of all streets.

LEADGATE.

WM. ALLEN, M.D., Medical Officer of Health.

<i>Vital Statistics.</i>				<i>Infectious Diseases—Cases and (Deaths).</i>			
	1910.	1909.			1910.	1909.	
Estimated Population ..	4,900	4,800		Total notifications	9	11	
Birth-rate	33·87	35·62		Smallpox	nil	nil	
Death-rate	16·53	16·66		Scarlet fever	4	7	
Zymotic death-rate ..	0·81	1·04		Diphtheria	1	nil	
Phthisis death-rate ..	1·22	0·81		Fevers (Enteric, &c.) ..	1	nil	
Total Tuberculosis death-rate	2·04	2·08		Puerperal fever	nil	nil	
Respiratory diseases death-rate	4·89	4·37		Cases treated at hospital ..	2	3	
Infant mortality-rate per 1,000 births	156	163		Measles	(1)	(1)	
				Whooping cough	(1)	(nil)	
				Diarrhœa	(2)	(3)	

1911 Census Population—4,990.

GENERAL SANITATION.

Water is satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—The disposal works acted efficiently. A new sewer was laid in Durham Road.

Scavenging is still undertaken by the owners themselves.

Housing.—(a) New Houses: Eight were built and occupied. In future all new houses are to be provided with water-closets. (b) Insanitary Property: Seven houses were reported and one repaired, three yards were cemented and three privies were converted into water-closets.

Streets.—The work of laying tar macadam footpaths and planting the streets with trees has made further progress. It is hoped that as the trees grow shelter will be obtained which will diminish the respiratory death-rate, now so pronounced, owing to the exposed situation of the district.

Dairies and Cowsheds were inspected as usual and one byre has been ordered to be closed. Others are in need of improvement.

Slaughter-houses were maintained satisfactorily.

Factories and Workshops were inspected regularly and found to be satisfactory.

SANITARY REQUIREMENTS.

1.—A public slaughter-house.

2.—Public scavenging.

3.—Veterinary inspection of dairy-cows.

RYTON.

JAMES W. SMITH, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	12,425	11,890
Birth-rate	36·37	37·84
Death-rate	12·31	12·19
Zymotic death-rate	1·77	0·92
Phthisis death-rate	0·56	0·58
Total Tuberculosis death-rate	1·04	1·51
Respiratory diseases death-rate.. ..	1·60	1·26
Infant mortality-rate per 1,000 births	97	106

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	95	124
Smallpox	nil	nil
Scarlet fever	58	70
Diphtheria	21	38
Fevers (Enteric, &c.)	7	11
Puerperal fever	nil	1
Cases treated at hospital ..	24	34
Measles	(1)	(1)
Whooping cough	(7)	(1)
Diarrhoea	(10)	(6)

1911 Census Population—12,951

Lowest recorded infant mortality rate for this district (see page 6).

GENERAL SANITATION.

Water was satisfactorily supplied by the Newcastle and Gateshead Water Company.

Sewerage.—The sewers were regularly cleansed and acted efficiently.

Scavenging was satisfactorily done.

Housing (a) New Houses: Plans for 154 were approved and 120 were occupied. New bye-laws regulating the erection of tenement dwellings have been adopted. (b) Insanitary Property: Two houses at Struthers were closed and action has been taken under the Hous-

ing T.P., &c., Act with respect to several other houses. The district still contains 958 ashpit privies and during the year only three of these insanitary conveniences were replaced by water-closets or ash-closets. It is recommended that water-closets should be supplied to all new houses.

Nuisances.—91 were abated by the service of 12 formal and 96 informal notices.

Streets.—Back streets and some of the lanes are reported to be very bad, but are to receive attention.

Dairies and Cowsheds received supervision and were maintained satisfactorily.

Slaughter-houses were periodically visited.

There are no factories in the district and the few workshops are satisfactory.

SANITARY REQUIREMENTS.

1.—Provision of water-closets in new houses and in houses with defective ash-closets or privies.

2.—Street improvements.

SEAHAM HARBOUR.

L. GERALD DILLON, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	15,000	14,000
Birth-rate	36·40	39·28
Death-rate	14·80	14·21
Zymotic death-rate ..	1·33	2·14
Phthisis death-rate ..	0·93	0·78
Total Tuberculosis death-rate	1·93	2·00
Respiratory diseases death-rate	2·54	1·92
Infant mortality-rate per 1,000 births	122	136

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	27	41
Smallpox	nil.	nil.
Scarlet fever	19	10
Diphtheria	3	14
Fevers (Enteric, &c.) ..	2	12
Puerperal fever	nil.	nil.
Cases treated at hospital ..	13	16
Measles	(7)	(16)
Whooping cough	(1)	(nil.)
Diarrhoea	(10)	(8)

1911 Census Population—15,759.
Measles (see page 32).

GENERAL SANITATION.

Water Supply, which is obtained from the magnesian limestone measures, was satisfactory. The two samples taken yielded satisfactory chemical analyses.

Sewerage.—The sewerage system worked efficiently.

Scavenging was done satisfactorily by the Council's own workmen and by contractors. The refuse was either used as manure or deposited at sea.

Housing.—(a) New Houses : 82 self-contained and 18 tenemented houses were built. (b) Insanitary Property : One house was closed under the Housing, T.P., &c., Act. Eleven yards were cemented out and 21 yards were repaired. Four insanitary ash-closets were converted into water-closets. It is reported that several back-to-back houses in the district require improvements.

Nuisances.—Twelve were abated by the service of informal notices. Eighteen cases of overcrowding were dealt with.

Streets.—A number of footpaths and several streets at Dawdon were made, but a number of other streets are reported to be in a bad condition.

Common Lodging Houses (4) were inspected regularly. Notices to enforce cleanliness were served on six occasions.

Milkshops (31) *Cowsheds* (2).—The latter are satisfactory, but six milkshops were wanting in cleanliness.

Slaughter-houses (17) were inspected and found clean, except in five instances.

Inspection of Ships.—242 ships were inspected and found satisfactory as regards cleanliness, except in one instance.

Factories (7), *Workshops* (27), and *Bakehouses* (51) were inspected on 398 occasions. Want of cleanliness in bakehouses was detected and remedied in six instances.

SANITARY REQUIREMENTS.

- 1.—Cementing or asphaltting of all improperly paved yards and footpaths.
- 2.—Street improvements.
- 3.—Acquisition of a bed in the Stanhope Sanatorium.

SHILDON.

S. FIELDEN, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	14,272	13,977
Birth-rate	30·26	32·62
Death-rate	12·96	14·02
Zymotic death-rate ..	1·12	1·43
Phthisis death-rate ..	0·84	0·95
Total Tuberculosis death-rate	1·61	1·64
Respiratory diseases death-rate	1·89	2·07
Infant mortality-rate per 1,000 births	106	96

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	89	104
Smallpox	nil.	nil.
Scarlet fever	31	40
Diphtheria	40	41
Fevers (Enteric, &c.)	11	10
Puerperal fever	nil.	1
Cases treated at hospital ..	53	61
Measles	(nil.)	(7)
Whooping cough	(2)	(nil.)
Diarrhoea	(7)	(9)

1911 Census Population—13,488.

Lowest recorded death-rate for this district (see page 5). Notification of Births Act in force since 1908. Vaccination (see page 18).

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company.

Sewerage.—The sewage disposal works continue satisfactory and excellent effluents are obtained. A new sewer was laid in back Alma Road in place of an old segment drain and defective sewer. The main sewer through the fields from Old Shildon to New Shildon has been seriously affected by pit falls. A defective sewer in the neighbourhood of the main street has been altered.

Scavenging continued to be performed satisfactorily by the Council's own workmen. 8,902 loads of refuse were dealt with by the destructor and 1,592 loads were deposited on to neighbouring farm land.

Housing.—(a) New Houses : Only 10 houses were built and occupied, building operations having been suspended owing to the serious colliery subsidences. (b) Insanitary Property : The back-to-back houses in Fryer Street have been converted into through houses, and water-closets have been substituted for the privy middens so that all the houses in this street are now supplied with water-closets. The insanitary property in Pickering Place has been much improved, the privy middens having been substituted by water closets, and the objectionable piggeries at the back of Primitive Street are no longer used. The promised improvements in Queen Street have been delayed in consequence of legal difficulties which it is hoped will soon be overcome. Two cases of overcrowding were dealt with.

Streets.—A back road is being provided between Pickering Place and Quarry Street, and a new road from the east end of Brown Street to Primitive Street is also in course of formation.

Cowsheds and Milkshops were inspected two or three times. The former with few exceptions are wooden erections and are not satisfactory.

Slaughter-houses have been frequently inspected. One required alterations which were satisfactorily carried out.

Factories (15) and Workshops (48) were all visited twice and were found to be satisfactory.

SANITARY REQUIREMENTS.

- 1.—To continue the abolition of privy middens.
 - 2.—To continue the cementing and asphalting of open spaces and back yards.
 - 3.—To continue the making of front and back streets.
 - 4.—The erection of new cowsheds and dairies.
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SOUTHWICK-ON-WEAR.

JOHN J. CARRUTHERS, M.B., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	15,148	15,148
Birth-rate	30·63	33·07
Death-rate	14·58	14·19
Zymotic death-rate ..	1·45	1·58
Phthisis death-rate ..	0·66	0·52
Total Tuberculosis death-rate	0·99	0·59
Respiratory diseases death-rate	2·90	3·23
Infant mortality-rate per per 1,000 births	137	117

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	50	88
Smallpox	nil.	nil.
Scarlet fever	29	65
Diphtheria	9	8
Fevers (Enteric, &c.)	12	15
Puerperal fever	nil.	nil.
Cases treated at hospital ..	34	62
Measles	(2)	(12)
Whooping cough	(4)	(nil.)
Diarrhœa	(15)	(6)

1911 Census Population—13,789.
Notification of Births Act in force since 1908.

GENERAL SANITATION.

Water was satisfactorily supplied by the Sunderland and South Shields Water Company. The public supply for Thistley Hall, referred to in previous reports, has not yet been obtained.

Sewerage.—The sewerage system acted efficiently.

Scavenging was well done by the Council's own workmen. The refuse is disposed of to farmers.

Housing.—(a) New Houses: 6 were erected. (b) *Insanitary Property:* Under the Housing, T.P., &c., Act 20 houses were inspected and closing orders were issued respecting four of them. Water-closets were substituted for 49 ashpit privies and 11 ash-closets. The district still contains 819 ashpit privies.

Nuisances.—360 were abated by the service of notices.

Dairies and Cowsheds were inspected frequently. In the district there are altogether about 60 dairy cows, and two herds containing about half the total number have been tested with tuberculin. All the cattle have been inspected by the Council's Veterinary Surgeon, and one cow suffering from tuberculosis of the udder was detected. "The owner ultimately disposed of this animal."

Common Lodging Houses.—None.

Slaughter-houses (6).—Slaughtering in the shops is still permitted in five instances.

Factories (16), *Workshops* (57), and *Workplaces* (1) were the subject of 495 inspections and three notices with respect to want of cleanliness (1), insufficient sanitary accommodation (2), were served and complied with.

SANITARY REQUIREMENTS.

- 1.—Continue to abolish privy ashpits and ash-closets.
- 2.—Substitute for them water-closets.
- 3.—Continue the work of concreting the back yards.
- 4.—A public slaughter-house.
- 5.—A public mortuary.

SPENNYMOOR.

W. MUSSELLWHITE, M.R.C.S., D P.H.,
Medical Officer of Health

Vital Statistics.

	1910.	1909.
Estimated Population ..	16,930	16,900
Birth-rate	41·05	40·59
Death-rate	14·76	18·52
Zymotic death-rate ..	1·71	2·71
Phthisis death-rate ..	1·00	1·24
Total Tuberculosis death-rate	1·41	1·59
Respiratory diseases death-rate	2·65	3·61
Infant mortality-rate per 1,000 births	136	171

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	145	116
Smallpox	nil.	nil.
Scarlet fever	103	68
Diphtheria	12	16
Fevers (Enteric, &c.)	4	7
Puerperal fever	2	2
Cases treated at hospital ..	101	80
Measles	(2)	(14)
Whooping cough	(6)	(nil.)
Diarrhoea	(19)	(29)

1911 Census Population—17,914.

Necessity for Health Visitor (see page 10). Spread of scarlet fever by mild unrecognized cases (see page 19).

GENERAL SANITATION.

Water Supply.—With the exception of a few outlying farms all the houses in the district are supplied by the Weardale and Consett Water Company. The Council are taking steps to have High Whitworth farm supplied with this water.

Sewerage.—The sewage disposal works for Spennymoor Ward are practically useless while there are none provided for Tudhoe and Ferryhill Wards, most of the sewage at present finding its way in an unpurified state into the river Wear. The Local Government Board have refused to sanction the loan for the new works until the price of the land has been settled. No settlement has yet been arrived at with the owners, and the Council are now taking steps to force the matter to arbitration.

Scavenging appears to have been better done by the contractors than in former years but the work requires constant supervision. Most of the refuse is carried to a tip at Whitworth, the remainder being spread on land. The provision of a refuse destructor is very desirable.

Housing.—(a) New Houses: 29 were erected and occupied and the supply is stated to be equal to the demand. (b) Insanitary Property: Notices were served on the owners of several insanitary properties and in many cases have been complied with or the necessary work is in hand. The owner of five houses in Back Burnett Street appeared before the D.C. with the result that the closing orders were postponed for three months. Four cases of overcrowding were dealt with by notices in addition to a few cases which were remedied without notice. As a result of constant pressure by the D.C. for the conversion of ashpit privies into ash-closets there are now only about 400 open ashpits remaining in the district, and Dr. Mussellwhite states:—"Whilst the ash-closets are a distinct improvement on the "old system of midden privies they are far from ideal. Their great "advantage is that they require more frequent cleansing."

Nuisances.—178 informal and 40 formal notices were served and 179 nuisances abated.

Streets.—None mentioned.

Common Lodging Houses (5) were reported to have been kept clean and well conducted, and model bye-laws for their control have been adopted.

Dairies and Cowsheds.—The whole of the cowsheds and dairies have been inspected twice during the year and the notices with regard to white-washing have been complied with. “Whilst the “cowsheds are all in accordance with the bye-laws, I cannot report “much improvement in regard to the way in which they are kept. “The cows are often in a very dirty state and in many cases the con- “ditions of milking are far from cleanly. As several new milk- “sellers have lately started in the district, the Council have recently “issued a notice requiring all milk-sellers to be registered again. “There is no system of veterinary inspection of cows in the district “with a view to the detection of tuberculous cows. In my opinion “it is important that such a system should be established.”

Slaughter-houses (31) were regularly inspected and found on the whole to be kept in a clean condition. They are, however, so scattered over the district that it is impossible for the inspector to systematically inspect them during the time of slaughtering.

Offensive Trades.—The two knacker yards have been kept clean and have given rise to no nuisance.

Factories (24), *Workshops* (79) and *Workplaces* (7) were the subject of 131 inspections. Nine defects were found, five of which were remedied. Nine written notices were served.

SANITARY REQUIREMENTS.

- 1.—Sewage disposal works for Tudhoe and Ferryhill Wards.
 - 2.—A refuse destructor.
 - 3.—Abolition of ashpit privies.
 - 4.—Inspection of dairy cows by a veterinary surgeon.
 - 5.—Appointment of a Health Visitor.
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STANHOPE.

JOHN GRAY, M.B., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	2,015	2,010
Birth-rate	19·35	21·34
Death-rate	12·40	10·94
Zymotic death-rate.. ..	0·49	nil.
Phthisis death-rate.. ..	0·99	2·98
Total Tuberculosis death-rate	0·99	2·98
Respiratory diseases death-rate	0·99	2·48
Infant mortality-rate per 1,000 births	205	116

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	28	3
Smallpox	nil.	nil.
Scarlet fever	22	nil.
Diphtheria	nil.	2
Fevers (Enteric, &c.)	3	nil.
Puerperal fever	nil.	nil.
Cases treated at hospital ..	no hospital.	
Measles.. ..	(nil.)	(nil.)
Whooping cough	(1)	(nil.)
Diarrhœa	(nil.)	(nil.)

1911 Census Population—2,010.

Highest infant mortality rate in the county (see page 6).

GENERAL SANITATION.

Water.—The supply was plentiful and of good quality. It is again recommended that metal covers should be fixed to the receiving chambers on the moors.

Sewerage.—The new works are nearing completion and are being connected with the different parts of the district. Dr. Gray says:—
 “Seeing that we are about to have a sewage system capable of effect-
 “ually draining the whole district, I would strongly recommend that
 “water-closets be provided for all new dwelling-houses, as there
 “can be little doubt that, from a Public Health point of view, the
 “water-carriage system is the cleanest, most rapid, most convenient,
 “and cheapest method of sewage disposal.”

Scavenging was well done but the work is difficult in certain yards.

Housing.—(a) New Houses: Two were erected. (b) Insanitary Property: The general sanitary state of the district is reported to be good, though there is some overcrowding. During the year eight ash-closets were converted into water-closets.

Nuisances.—32 notices were served with satisfactory results.

Slaughter-houses (5) and *Dairies and Cowsheds* are reported to be maintained satisfactorily.

SANITARY REQUIREMENTS.

- 1.—Some means of isolating cases of infectious disease.
- 2.—Improved access to certain back premises to facilitate public scavenging.
- 3.—Notification of tubercular disease of the lungs.

STANLEY.

T. BENSON, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	23,500	21,500
Birth-rate	36·12	36·04
Death-rate	13·02	23·44
Zymotic death-rate ..	0·80	1·58
Phthisis death-rate ..	0·76	0·88
Total Tuberculosis death-rate	2·04	1·48
Respiratory diseases death-rate	1·70	3·25
Infant mortality-rate per 1,000 births	137	138

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	152	255
Smallpox	nil.	nil.
Scarlet fever	95	189
Diphtheria	31	45
Fevers (Enteric, &c.) ..	16	10
Puerperal fever	2	nil.
Cases treated at hospital ..	136	180
Measles	(2)	(5)
Whooping cough	(1)	(4)
Diarrhoea	(4)	(5)

1911 Census Population—23,300.

Notification of Births Act in force since 1908.

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company. A public supply was laid on to two houses in East Kyo.

Sewerage.—The extensions to the South Moor works necessitated by the increase in the population are to be commenced at an early date.

Scavenging was done very satisfactorily by the contractors.

Housing.—(a) New Houses: 291 self-contained and 10 tenemented (flats) houses were built. (b) Insanitary Property: Under the

Housing T.P., &c. Act 40 dwellings were inspected and closing orders were made regarding 34, the owners of the remaining 6 being negotiated with at the present time. In Busty Street (12 back-to-back houses), Wood Street (16 back-to-back houses), and 6 houses in the adjoining street have all been closed, as they are incapable of being rendered habitable. Improvements are still required to houses in George Street and Alfred Street, Havannah (provision of additional room and back door, and alterations to out-offices), Quaking Houses, South Moor (50), High South Moor (20), the Barracks (19 2-roomed cottages with unceiled attic approached by step-ladder, which require reconstruction), and Pine and Poplar Streets (provision of paved yards and sanitary conveniences). Improvements to the High Street houses at Stanley have been interrupted owing to the closure of the adjoining colliery, but the work has now been resumed. The district contains 1,393 ashpit privies. During the year 18 ashpit privies were converted into ash-closets.

Nuisances.—239 were abated by the service of 291 formal and 22 informal notices.

Milk Supply.—There are 8 milk vendors and 10 cowkeepers in the district, and the supply is reported to be good.

Slaughter-houses (8) and *Common Lodging House* (1) were maintained satisfactorily.

Factories (17) and *Workshops* (38) are reported to be satisfactory. Two nuisances were abated.

SANITARY REQUIREMENTS.

1.—Extension of the South Moor sewage disposal works

2.—Improvements to the housing accommodation.

TANFIELD

T. BENSON, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	10,600	10,100
Birth-rate	31·03	35·94
Death-rate	10·37	12·37
Zymotic death-rate ..	0·84	1·28
Phthisis death-rate ..	0·37	0·79
Total Tuberculosis death-rate	0·94	1·58
Respiratory diseases death-rate	1·13	1·78
Infant mortality-rate per 1,000 births	106	121

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	131	154
Smallpox	nil.	nil.
Scarlet fever	69	94
Diphtheria	31	26
Fevers (Enteric, &c.) ..	4	5
Puerperal fever	nil.	1
Cases treated at hospital ..	92	72
Measles	(nil.)	(4)
Whooping cough	(1)	(1)
Diarrhœa	(4)	(4)

1911 Census Population—10,105.

Lowest death-rate in the county (see page 5).

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company. At Friarside the water has been laid into the houses.

Sewerage.—The works at Tantobie, White-le-Head, Tanfield village and Burnopfield are all reported to be inadequate, and extensions to the same are recommended.

Scavenging was satisfactorily done by contractors.

Housing.—(a) New Houses: 60 were erected. (b) Insanitary Property: Under Housing T.P., &c. Act representation was made to the District Council respecting 7 houses of which 3 were closed and 4 are being rendered habitable. Improvements were made to houses at Lintz (general repairs and provision of paving), Low Friarside (repairs), White-le-Head (ceiling, spouting and yard paving), Tanfield Lea (ceiling, provision of back doors, and new ash-closets). 94 ashpit privies were abolished at Tanfield Lea, Tanfield, Hobson and Burnopfield. The district still contains 950 ashpit privies.

Milk Supply.—There are 22 milk vendors whose premises are reported to be fairly satisfactory.

Slaughter-houses (7) were periodically inspected and found satisfactory.

Factories (14) and *Workshops* (21) were the subject of 70 inspections and two defects (defective sanitary accommodation) were detected and remedied.

SANITARY REQUIREMENTS.

Extensions to the sewage disposal works at Tantobie, White-le-Head, Tanfield, and Burnopfield.

TOW LAW.

J. H. NAISMITH, M D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	4,371	4,371
Birth-rate	30·42	26·53
Death-rate	10·52	13·72
Zymotic death-rate	0·91	0·68
Phthisis death-rate	0·45	0·45
Total Tuberculosis death-rate	1·14	0·91
Respiratory diseases death-rate	0·91	2·97
Infant mortality-rate per 1,000 births	112	77

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	34	58
Smallpox	nil.	nil.
Scarlet fever	17	43
Diphtheria	5	1
Fevers (Enteric, &c.)	1	2
Puerperal fever	nil.	nil.
Cases treated at hospital ..	15	30
Measles	(nil.)	(nil.)
Whooping cough	(1)	(nil.)
Diarrhoea	(2)	(nil.)

1911 Census Population—4,327.

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Company.

Sewerage.—The sewerage of the district was satisfactory. The disposal works are to be enlarged.

Scavenging was satisfactorily attended to.

Housing.—(a) New Houses: 8 houses are in course of erection.
(b) Insanitary Property: The chief defects in the house accommodation consist of faulty roofs, defective spouting and gullies, and insanitary ashpit privies.

Nuisances.—17 were abated by the service of 4 formal and 22 informal notices.

Slaughter-houses were maintained clean but the *Dairies* and *Cowsheds* are reported to be “all more or less primitive in construction” and require a lot of improvement.

Workshops (2) were visited on 4 occasions and found satisfactory.

SANITARY REQUIREMENTS.

- 1.—Improvements to the housing accommodation.
- 2.—Improvements to the cowsheds.

WHICKHAM.

ANDREW SMITH, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	17,261	16,719
Birth-rate	31·97	36·18
Death-rate	12·91	13·33
Zymotic death-rate..	1·79	0·83
Phthisis death-rate..	0·57	1·13
Total Tuberculosis death-rate	1·04	1·85
Respiratory diseases death-rate	1·39	1·73
Infant mortality-rate per 1,000 births	115	95

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	137	123
Smallpox	nil.	nil.
Scarlet fever	64	56
Diphtheria	43	47
Fevers (Enteric, &c.)	19	9
Puerperal fever	2	3
Cases treated at hospital ..	66	57
Measles	(4)	(4)
Whooping cough	(10)	(1)
Diarrhoea	(9)	(6)

1911 Census Population—18,332.

Notification of Births Act in force since 1908.

Enteric fever at Dunston (see page 25).

GENERAL SANITATION.

Water.—The district was satisfactorily supplied, Marley Hill by the Weardale and Consett Water Company and the rest of the district by the Newcastle and Gateshead Water Company. A proper supply has been laid on to the houses at the brickworks, Swalwell.

Sewerage.—A comprehensive scheme for Marley Hill, High Row, and Byermoor is under consideration.

Scavenging was efficiently done by the Council's own workmen.

Housing.—(a) New Houses: 106 were built and 87 were occupied, chiefly at Dunston where “the new streets are mostly of the Avenue type with wide well paved back streets and the front street made of extended gardens with a cement roadway in the middle.” It is recommended that water-closets be provided in all new houses. (b) Insanitary Property: During the year the last of the ashpit privies were abolished from the villages of Whickham, Swalwell, Marley Hill and Dunston. There now remains only 16 ashpit privies in the district which are attached to outlying farm houses. In addition to supplying a new sewerage system to Marley Hill, it is proposed to make up and construct new streets and ultimately to convert all the back-to-back houses into through houses. In other parts of the district very considerable improvements are to be effected by the making and paving of the streets, notably at Dunston and Whickham.

Nuisances.—1,237 were abated by the service of 1,325 formal notices. The conditions dealt with include defectively paved yards (31) and a number of cases where poultry, pigeons, &c., were kept in unsuitable back yards.

Dairies and Cowsheds were frequently inspected, and the air space is satisfactory though the present bye-laws only require a minimum of 500 cubic feet per cow.

Slaughter-houses are still unregistered but were inspected regularly. It has been resolved that all slaughter-houses be licensed, such license to be for a period of 12 months.

Factories and Workshops were all inspected twice and are reported to be satisfactory.

SANITARY REQUIREMENTS.

1.—Improvements to the housing accommodation in certain parts of the district.

2.—Provision of water-closets in new houses.

3.—Abolition of open channels in Marley Hill and Byermoor.

4.—Street works.

5.—Registration of slaughter-houses.

WILLINGTON.

R. E. BROWN, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	7,980	7,970
Birth-rate	34·21	34·62
Death-rate	14·66	12·92
Zymotic death-rate ..	2·38	0·75
Phthisis death-rate ..	0·50	0·75
Total Tuberculosis death-rate	0·62	1·13
Respiratory diseases death-rate	2·88	1·13
Infant mortality-rate per 1,000 births	146	108

Infectious Diseases Cases and (Deaths).

	1910.	1909.
Total notifications	54	31
Smallpox	nil.	nil.
Scarlet fever	12	11
Diphtheria	1	3
Fevers (Enteric, &c.) ..	32	13
Puerperal fever	nil.	1
Cases treated at hospital ..	41	23
Measles	(1)	(1)
Whooping cough	(nil.)	(nil.)
Diarrhoea	(11)	(1)

1911 Census Population—8,734.

Enteric fever at Oakenshaw (see page 24).

GENERAL SANITATION.

Water was satisfactorily supplied by the Weardale and Consett Water Company. The water from three springs at outlying farms was analysed and found satisfactory.

Sewerage.—A new sewer has been laid to prevent the pollution of the Willington Burn, and land has been acquired at Page Bank for the treatment of the sewage from this village, which at present pollutes the river Wear. The effluent at the Willington Works still **remains unsatisfactory**, and improvements are to be made to the filters at an early date.

Scavenging has at times been most unsatisfactorily done by the contractors and it is recommended that **greater care should be exercised** in the letting of the contracts.

Housing.—(a) New Houses: 15 were erected and plans for 46 houses were approved. (b) Insanitary Property: At Oakenshaw 37 houses are to be reconstructed; eight of these are at present in hand,

the attic being raised and a staircase provided. Similar improvements are required at Brancepeth Colliery, in Park Street (17), and High Street (12). In Russell Place stairhead windows have been inserted into 68 single houses. The report once more calls attention to the back-to-back houses in Mill Street, High Street, Commercial Street, Park Terrace, and Low Willington and at Page Bank.

Nuisances.—341 were abated by the service of 122 formal and 292 informal notices.

Streets.—Several streets are being made under the Private Street Works Act but a large amount of this work still requires to be done.

Dairies and Cowsheds.—Two byres are reported to be in a very bad state of repair, but the remainder are fairly satisfactorily maintained.

Slaughter-houses (6) were regularly inspected and found satisfactory.

Factories (10), *Workshops* (19), and *Workplaces* (1) were inspected on 60 occasions, and in four instances there was insufficient closet accommodation. Notices were served to remedy the defects.

SANITARY REQUIREMENTS.

- 1.—The abolition of open privy-middens throughout the district.
- 2.—The footpath on the north side of the Main Street to be completed.
- 3.—The making, paving, and channelling of the private streets, both in the town and the collieries.
- 4.—That the cowsheds which have not yet received attention be attended to.

5.—Improvements to the housing accommodation.

6.—A Health Visitor.

RURAL DISTRICTS.

AUCKLAND RURAL DISTRICT.

J. G. WILLIS, L.R.C.P., D.P.H., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	61,120	60,505
Birth-rate	30·95	33·86
Death-rate	13·93	14·27
Zymotic death-rate ..	1·21	1·33
Phthisis death-rate ..	0·55	0·62
Total Tuberculosis death-rate	1·14	1·18
Respiratory diseases death-rate	2·22	2·01
Infant mortality-rate per 1,000 births	133	128

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	347	512
Smallpox	nil.	nil.
Scarlet fever	238	340
Diphtheria	28	59
Fevers (Enteric, &c.) ..	30	55
Puerperal fever	5	2
Cases treated at hospital ..	130	172
Measles	(11)	(8)
Whooping cough	(9)	(13)
Diarrhoea	(42)	(31)

1911 Census Population—58,365.

Lowest recorded death-rate for this district (see page 5).

GENERAL SANITATION.

Water.—The greater part of the district was well supplied by the Weardale and Consett and Barnard Castle Water Companies.

Sewerage.—Sewage disposal schemes are in hand for Byers Green, Witton Park, Evenwood Gate, and Gaunless Valley.

Scavenging is reported to have been done more efficiently. It is once again recommended that the work be done at night in those parts of the district not strictly rural.

Housing.—(a) New Houses: 144 were erected and occupied; plans for 297 houses were approved. Under the Housing, T.P., &c., Act closing orders were made with respect to 17 houses, of which 6 have since been rendered habitable. Under Section 15, 11 houses were dealt with. 328 midden privies were converted into

ash-closets, and nine into water-closets, but the district still contains over 2,000 ashpit privies. The advantages of the water-carriage system are alluded to, and it is pointed out that the district being well supplied with water, adequately sewered, and possessing means for the disposal of the sewage, is well suited for this system.

Nuisances.—1,213 were abated by the service of 339 formal and 1,156 informal notices.

Streets.—A number of private streets were dealt with.

Dairies and Cowsheds (186) were inspected periodically. New bye-laws making “600 cubic feet a minimum” to be measured from a height “not exceeding 12 feet” have been adopted.

Slaughter-houses (60), *Common Lodging Houses* (2), *Factories* (16), *Workshops* (98), and *Workplace* (1) were periodically inspected and found satisfactory.

SANITARY REQUIREMENTS.

1.—Scavenging at night-time in those parts of the district which are not strictly rural.

2.—Provision of water-closets in new houses and in substitution of midden-privies.

3.—Utilisation of the small-pox hospital as a sanatorium.

4.—A Health Visitor.

BARNARD CASTLE RURAL DISTRICT.

JAMES C. NELIGAN, L.R.C.S., Medical Officer of Health.

<i>Vital Statistics.</i>			<i>Infectious Diseases—Cases and (Deaths).</i>		
	1910.	1909.		1910.	1909.
Estimated Population ..	12,118	11,974	Total notifications	129	64
Birth-rate	24·59	27·72	Smallpox	nil.	nil.
Death-rate	12·70	13·82	Scarlet fever	24	11
Zymotic death-rate	0·66	0·25	Diphtheria	101	12
Phthisis death-rate.. ..	0·66	1·41	Fevers (Enteric, &c.)	1	1
Total Tuberculosis death-rate	0·99	1·50	Puerperal fever	nil.	nil.
Respiratory diseases death-rate	1·89	1·50	Cases treated at hospital ..	87	6
Infant mortality-rate per 1,000 births	77	117	Measles	(1)	(nil.)
			Whooping cough	(nil.)	(3)
			Diarrhoea	(1)	(nil.)

1911 Census Population—11,681.

Lowest infant mortality rate in the county (see page 6). Serious outbreak of diphtheria at Middleton-in-Teesdale (see page 21).

GENERAL SANITATION.

Water.—The supply throughout the district was satisfactory, but at Middleton the reservoir should be enlarged and some earthenware pipes replaced by cast-iron pipes.

Sewerage.—At Cockfield the works were neglected and gave bad results, but in other parts of the district the works acted efficiently. 419 yards of new sewers have been laid at Middleton.

Scavenging was satisfactorily done where it was undertaken by the contractors. At Middleton, Gainford, and Staindrop the occupiers are responsible for their own scavenging.

Housing (a) New Houses: 34 were built at Cockfield (29), Middleton (3), and Staindrop (2). (b) Insanitary Property: Under the Housing T.P., &c., Act closing orders were made with respect to four houses, of which three have since been rendered habitable; in addition, structural defects were remedied in 34 houses and nine yards. Water-closets were substituted for 17 ashpits and three ash-closets, and 13 ashpit privies were converted into ash-closets. The district still contains 1,484 ashpit privies.

Nuisances.—186 were abated by the service of six formal and 187 informal notices.

Dairies and Cowsheds were maintained satisfactorily. Defects at seven cowsheds were remedied.

Slaughter-houses (17).—Defects at two premises were dealt with; the remainder were generally satisfactory.

Common Lodging Houses (1), *Factories* (15), *Workshops* (39), and *Workplaces* (3) were periodically inspected and found satisfactory.

SANITARY REQUIREMENTS.

- 1.—Abolition of midden-privies.
- 2.—Extension of the Isolation Hospital.
- 3.—A Small-pox Hospital.

CHESTER-LE-STREET RURAL DISTRICT.

JOHN TAYLOR, M.D., D.P.H., Medical Officer
of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	63,869	62,739
Birth-rate	36·65	37·63
Death-rate	14·85	15·01
Zymotic death-rate	1·78	1·78
Phthisis death-rate	0·67	0·65
Total Tuberculosis death-rate	1·28	1·14
Respiratory diseases death-rate	2·36	2·64
Infant mortality-rate per 1,000 births	143	140

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	353	574
Smallpox	nil.	nil.
Scarlet fever	199	379
Diphtheria	53	76
Fevers (Enteric, &c.)	28	51
Puerperal fever	2	4
Cases treated at hospital ..	69	98
Measles	(4)	(12)
Whooping cough	(18)	(23)
Diarrhœa	(71)	(42)

1911 Census Population—63,882.

Lowest recorded death-rate for this district (see page 5). Vaccination (see page 17).
The ætiology of diarrhœa (see page 33). Voluntary notification of phthisis in operation.

GENERAL SANITATION.

Water.—For the most part the district was plentifully supplied with water but there was a deficiency at Lumley Great and Lumley Little, which are supplied by the Weardale and Consett Company, though this portion of the district is not in the Water Company's area. In the township of Lamesley, the Weardale and

Consett water was laid on to Bewick Main village and Urpeth Riding Farm (three houses), and the provision of a better supply is being considered for Bainsley Lane, Fugar Bar, and Pennyfine, which are at present dependent on shallow wells. Water was laid into houses at Pattinson Town (84), and Washington Staiths (24).

Sewerage.—A new sewerage system for the north-eastern corner of Eighton Banks was completed, and similar work is in hand for the south-eastern portion of this locality. At Lumley, sewers have been laid in Herron's Row and Trunk Row, and similar work is in hand for Club Row and Bloomfield Terrace, Pelton Fell. The sewerage of the Cross Rows, Urpeth, which are at present dependent on open channels, should also be undertaken. A site has been secured for the Pelton sewage disposal works.

Scavenging.—This work is for the most part done by contractors but the scavenging of the township of Cocken is undertaken by the Council. The work requires considerable supervision on the part of the Inspector, this being particularly the case at the time of the renewal of the contracts. Dr. Taylor calls attention to the desirability of careful scavenging, and is of the opinion that the work can be more efficiently done by the Council's own workmen than by contractors.

Housing.—(a) New Houses: 348 houses were built and occupied during the year in the townships of Usworth (65), Witton Gilbert (63), Pelton (61), Washington (39), Lamesley (38), Birtley (29), Harraton (21), Lumley Great (18), Urpeth (10), Burnmoor (4). The Council are considering a scheme for the erection of 21 three-roomed and the same number of five-roomed houses in the Washington township. (b) Insanitary Property: The sanitary circumstances of the several townships in the district are reviewed at length in the report, and mention is made of improvements effected during the year, and of a number of conditions which require to be remedied in the immediate future. 146 houses were closed by agreement with the owners in the townships of Barmston (27), Washington (22), Harraton (22), Lumley Great (18), Burnmoor (12),

Ouston (9), Pelton (8), Usworth (6), Lamesley (4), Birtley (4), Lumley Little (2), and Urpeth (2). Of these houses 27 in Barmston and 17 in Washington were back-to-back tenements and have since been added to the adjacent tenements to make through houses. Dr. Taylor states, however, that most of the houses enumerated in his last annual report as unfit for habitation remain occupied, e.g., Biddick Row, at Washington, and Taylor's Row, West side of Square, and Middle High Row, at Usworth Colliery. During the year 81 houses were rebuilt and 210 houses were substantially repaired, 313 yards were laid in cement and 308 ash-closets and 34 water-closets were built.

Improvements have, or are being made, to houses in the townships of Barmston (at Pattinson Town 46 back-to-back houses were converted into through houses and at the same time provided with sculleries and in every way brought up to modern requirements and The Cottages (32) were repaired generally and provided with sculleries and at Barmston Hill Top six back-to-back tenements were converted into through houses); Birtley (at St. Bede's Row, Birtley, 27 houses were provided with new pantries and conveniences and the surroundings in Birtley Terrace (8), New Street (9), School Street (16), Hill Street (25), and Church Street (8) were paved with cement); Burnmoor (at New Lambton houses were rebuilt in Engine Row (4), and Chapel Row (5) while 10 more houses are also in hand); Cocken (10 houses repaired and 17 yards cemented); Edmondsley (three houses rebuilt and 12 yards cemented); Lamesley (at Kibblesworth 10 houses rebuilt and 46 houses were drained); Lumley Great (at Lumley houses were rebuilt in Trunk Row and Black Row (1)); Ouston (at Ouston Square 9 houses were demolished preparatory to being rebuilt); Pelton (at Perkinsville cement floors were laid in 80 houses and the yards for the same were also cemented and at Hunt's Buildings some back-to-back houses were converted into through houses); Plawsworth (at Nettlesworth three houses were rebuilt and seven reconstructed); Washington (at Speculation Place, New Washington, 26 back-to-back tenements were converted into through houses and a number of houses were repaired); Witton Gilbert (eight houses rebuilt and 37 yards were laid in cement).

During the year 309 ash-closets and 34 water-closets were substituted for ashpit privies in the townships of Barmston (48), Birtley (45 ash-closets and 12 water-closets), Plawsworth (30 ash-closets and one water-closet), Pelton (27 ash-closets and five water-closets), Edmondsley (22 ash-closets), and Burnmoor (20 ash-closets) &c.

It is recommended that action should be taken with regard to insanitary conveniences in the townships of Harraton (also unpaved yards), Lumley Great, Ouston, Pelton, and Plawsworth.

Referring to some insanitary conveniences at Lumley Terrace, Dr. Taylor says :—“ The old dilapidated ashpit privies were situated “ about 45 to 50 feet from the house doors, separated from them by “ a road always bad in wet weather. The owners were asked to “ provide back yards for those houses (28) and to build either an “ ash-closet or water-closet in the yard. The owners, however, “ refused to provide a separate yard for each house or a water-closet “ but agreed to erect ash-closets at a distance of 15 or 16 feet from “ the houses and to improve the street between the houses and the “ closets. In my opinion this cannot be called any real improvement. “ Certainly the closets are brought nearer the houses, but when that “ is said all is said. The road will never be good for any length of “ time, and privies so situated cannot be said to have the least “ privacy.”

Closure of insanitary houses in the townships of Waldrige, Usworth (Middle High Row, Taylor’s Row, and West side of Square, Usworth Colliery), and Urpeth (Eden Square) is recommended and improvements are required to houses at Eden Rows, Quality Row, Palace Row, and Hammer Square, Beamish.

Streets.—During the year 7,369 lineal yards of streets were made under the Private Street Works Act in the townships of Birtley (14), Pelton Grange Villa (20), Usworth (25), (New Washington), and Witton Gilbert (3). There still remains a considerable number of streets requiring attention notably at West Pelton, Beamish, Penshaw View, and in the townships of Usworth and Witton Gilbert.

Common Lodging Houses (1) was inspected frequently. The premises are ill-adapted for use as a lodging house.

Slaughter-houses were inspected regularly and generally were found in a satisfactory condition.

Dairies and Cowsheds.—There are approximately 150 cowsheds and over one thousand milch cows in the district. The report refers to the defective condition of a number of the smaller byres and the uncleanness of the milkers in the majority of cases is commented upon.

Factories and Workshops were inspected regularly. Notices were served in seven instances for deficient closet accommodation, uncleanness, &c.

SANITARY REQUIREMENTS.

1.—Improvements to the water supply of certain parts of the district.

2.—Sewering of the remainder of Lumley village, and of the Cross Rows, Urpeth.

3.—Improvements to the housing accommodation and abolition of ashpit privies as mentioned above.

4.—Street works.

5.—Improvements to the cowsheds.

6.—Additional hospital accommodation.

7.—A Health Visitor.

DARLINGTON RURAL DISTRICT.

ROBERT H. MEIKLE, M.B., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	9,591	9,591
Birth-rate	28.51	28.04
Death-rate	13.97	14.38
Zymotic death-rate	0.82	0.31
Phthisis death-rate	0.93	0.83
Total Tuberculosis death-rate	1.04	0.93
Respiratory diseases death-rate	1.87	1.45
Infant mortality-rate per 1,000 births	109	104

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	47	26
Smallpox	nil.	nil.
Scarlet fever	23	12
Diphtheria	8	5
Fevers (Enteric, &c.)	10	5
Puerperal fever	nil.	nil.
Cases treated at hospital ..	16	12
Measles	(?)	(nil.)
Whooping cough	(2)	(1)
Diarrhoea	(3)	(1)

1911 Census Population—10,914.
Necessity for Health Visitor (see page 10).

GENERAL SANITATION.

Water Supply.—The supply to Great Aycliffe continued wholesome and pure, the tanks at the works having been thoroughly cleansed and the water main extended to a house at the extreme end of the village. At Brafferton the public dip well at the west end of the village was found to be polluted but the water was secured against further contamination and a small pump fixed. Legal proceedings were necessary to enforce the notice served on the owner of a farm at Haughton Bank, Heighington, to supply a pure and wholesome water in lieu of that obtained from a deep well in the garden into which the sewage of the house percolated. A house at Hurworth which depended on a deep well for its water supply was connected with the Tees Valley Water Board's mains.

Sewerage.—Although entirely satisfactory effluents were obtained from the Blackwell sewage disposal works, complaint has been made of the smell from the filter ground which may result in an alteration in the position of it. The sewerage of Great Burdon is stated to be unsatisfactory owing to the sewers being composed of common field pipes with very little fall and a new system is recommended. No complaint has been received since the filling in of the pond below the tank at Low Coniscliffe. The Harrowgate Hill works continue satisfactory as do those at Low Hail and Hurworth Place. Plans have been prepared for dealing with the sewage of Sadberge village by gravitation instead of pumping. This scheme if carried out would mean a great saving and the whole of the sewage of the village would be dealt with at one place instead of in two tanks. Plans were also prepared for dealing with the sewage of Harrowgate village on the Harrowgate Hill Estate sewage disposal works. At Middleton-St.-George alterations are being made to the works and the beds are being levelled and more land is to be used for filtration.

Scavenging was well performed throughout the district with the exception of two parishes from which complaints were made, and on the contractors being written to the work was greatly improved. Dr. Meikle again draws special attention to the fact that where public scavenging has been adopted very few cases of infectious disease

have been notified, and he recommends the adoption of it for Sadberge as it was found on repeated inspections that at all places where cases of infectious disease occurred the ashpits were very full and had not been scavenged for a considerable time.

Housing.—(a) New Houses: 12 were erected and occupied and plans for seven more were passed. (b) Insanitary Property: At Sadberge 15 houses were condemned as unfit for habitation, of which six have been put into a habitable condition, other six are to be similarly dealt with, and the remaining three are to be demolished by the owner. Defects of closet accommodation, drainage and paving were remedied without the making of closing orders. The yards of 38 houses in the Old and New Rows at Middleton-St.-George, were laid in cement concrete in place of common bricks, and gullies were provided for each house. Notices were served for the repair of three houses at the Mill, Coatham Mundeville, which were well advanced at the end of the year. Legal proceedings were necessary to enforce the drainage of a farm at Haughton Bank, Heighington, whilst farm premises at Toy Top Farm, Heighington, were remodelled and drained. Two ashpit privies at Great Aycliffe were converted into ash-closets and the adjoining yards paved. At Central Buildings, Middleton-St.-George, a large ashpit common to 38 persons, with three privies connected to it was pulled down and converted into ash-closets, one for each tenant.

Nuisances.—134 informal and 13 formal notices were served and 133 nuisances abated.

Streets.—The streets on the Harrowgate Hill Estate were reported to be “in a foundering condition. Access to several of the houses “by cart is almost impossible.”

Dairies and Cowsheds.—10 dairies and 17 cowsheds were improved during the year, many of them as a result of verbal suggestions, and five informal and two formal notices were served. In four cases new byres are required, which are to be built during the ensuing year. The majority of the byres visited were thoroughly whitewashed and very clean. The Dairies, Cowsheds, and Milkshops

Regulations were revised during the year. A case of anthrax occurred at a farm near Harrowgate Hill, the carcass being cremated, the milk supply stopped for 14 days, and all other necessary precautions taken at the farm.

Slaughter-houses.—The bye-laws in force in the district were adopted as long ago as 1877, and Dr. Meikle recommends that they be revised and brought up-to-date.

Factories and Workshops (44) were regularly visited, and three defects of ventilation, &c., found and remedied.

SANITARY REQUIREMENTS.

- 1.—Sewerage of Great Burdon.
- 2.—Public scavenging at Sadberge.
- 3.—Street works in the Harrowgate Hill Estate.
- 4.—Improvements to cow-byres.
- 5.—Revision of the bye-laws for slaughter-houses.
- 6.—A Health Visitor.

DURHAM RURAL DISTRICT.

A. T. HARRISON, L.S.A., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	29,676	29,301
Birth-rate	34·37	35·69
Death-rate	16·74	15·15
Zymotic death-rate ..	2·19	1·29
Phthisis death-rate ..	0·84	0·95
Total Tuberculosis death-rate	1·65	1·70
Respiratory diseases death-rate	2·39	2·59
Infant mortality-rate per 1,000 births	145	129

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	190	196
Smallpox	nil.	nil.
Scarlet fever	73	105
Diphtheria	85	51
Fevers (Enteric, &c.)	15	27
Puerperal fever	nil.	1
Cases treated at hospital ..	97	121
Measles	(14)	(2)
Whooping cough	(9)	(3)
Diarrhoea	(27)	(22)

1911 Census Population—30,797.

GENERAL SANITATION.

Water.—Most of the district is well supplied by the Weardale and Consett Water Company. Old Cassop, Quarrington Hill, Cassop Colliery, and Kelloe are supplied by Messrs. Walter Scott & Co. and Ludworth by the Weardale Coke and Coal Company, Ltd. A number of new houses at Quarrington Hill are supplied with water pumped by a windmill from springs near Coxhoe Colliery into a small storage tank and carried by pipes to the houses. A shallow well at a farmhouse at Tursdale was found to be seriously polluted and, as a more wholesome supply cannot be reasonably obtained, an attempt is being made to protect the well from contamination. A farm supply near Finchale Abbey was also polluted and new delivery piping from the spring has been laid. The places still without a proper supply are Old Quarrington, Brasside, Cassop Smithy, and Strawberry Hill Farms, and Broomside Pit Cottages.

Sewerage.—The sewers and sewage disposal work generally throughout the district have been well attended to and kept in proper working order. Ushaw Moor Sewage Disposal Works, which had been damaged by colliery workings, have been repaired and the irrigation land relevelled. New sewers or disposal works have been, or are being constructed, for the villages of Bearpark and Shadforth, whilst sewers have been provided for Ludworth and similar work has been commenced for a portion of Shincliffe Colliery. Plans and estimates for sewers and sewage disposal works for East Hetton are being prepared. A number of becks in the district are polluted by sewage from East Hetton, California, Ludworth, Shadforth, Sherburn, Sherburn House, Littleton and Low Pittington. The pollution of the river Browney, which receives sewage from places outside the district, is stated to be less marked than formerly. Dr. Harrison states:—"The open channels in use in certain parts of the district are, in my opinion, greatly inferior to closed drains. An attempt is, however, being made to render them efficient by employing a man in each locality in which they exist to keep them clean by careful attention daily."

Scavenging is done by public scavengers throughout the district with the exception of St. Oswald's, Sherburn Hospital, Whitwell, and

Brancepeth where the work is carried out by the occupiers themselves. The refuse is disposed of on to land.

Housing.—(a) New Houses: 113 were completed and occupied, and plans were passed for 14 new streets, 191 new dwelling houses, and 20 other new buildings. (b) Insanitary Property: 10 houses were closed and one demolished. The defects in 14 houses were remedied without closing orders being made, whilst in some cases in which closing orders had been made the work was commenced for putting the houses into a habitable condition. Closing orders were made respecting 35 houses in Front Double Row, Quarrington Hill, but were postponed for three months with a view to the defects being remedied. The owners have agreed to raise and reconstruct 16 new houses in Long Row, Coxhoe, and provide them with new ash-closets and coal-houses. Six of the 10 houses in West Hetton Rows, Coxhoe, have already been raised and reconstructed. Paving has been placed along the fronts of the houses in Heysham Terrace, Kelloe, but the rebuilding of the houses in Burrell Street, Kelloe, has been deferred pending the decision of the Local Government Board as regards the sewerage of the village. At Low Pittington eight houses were closed as unfit for habitation and 12 were made habitable. As a result of notices served on the owners of 10 houses known as Cottage Row, Ludworth, work has been commenced for making them fit for habitation. The provision of impervious floors to houses at Littleton has made progress, while at Sherburn village and in Lambton Street, Sherburn Hill, a number of open-jointed brick floors have been replaced by cement. About half of the insanitary 17 houses in this last named street have been reconstructed. Under the Housing (Inspection of District) Regulations, 1910, 175 houses in the parishes of Belmont, Cassop-cum-Quarrington, Pittington, Shadforth, Sherburn, Coxhoe, and Framwellgate, were inspected, four representations with a view to closing orders were made, and 77 closing orders were made. A number of ash-closets have been substituted for insanitary midden privies at Belmont (6), Sherburn village, Bearpark (42), and Framwellgate Moor (40), eight more houses in this village being pulled down to provide space for these ash-closets. Earth-closets have been provided for 16 houses at Crossgate Moor and the front of these houses have been paved. The

owners have undertaken to replace the insanitary ashpit privies in William Street, Charles Street, George Street, and John Street, Kimblesworth, by ash-closets during the ensuing year. At Shincliff Bank Top, Ushaw Moor, Broompark, and Brasside the conditions remain practically the same as stated in last year's report.

Nuisances.—567 were abated as the result of the service of 682 notices.

Dairies and Cowsheds.—These have been frequently and carefully inspected during the year and a number of considerable structural improvements were found in them. In two cases where milk vendors were without a proper supply of water it was provided, and in other cases an attempt is being made to provide it. Dr. Harrison again recommends the appointment of a Committee of the Council to deal with the milk-sellers whose premises are in an unsatisfactory condition. During the year four tuberculous cows were discovered, one of them was destroyed, and the other three were removed from the locality in which they were found.

Slaughter-houses.—The condition of the larger slaughter-houses was found to be satisfactory, but those of a few butchers in a small way of business required frequent inspection to keep them in proper condition.

Factories and Workshops.—Not mentioned.

SANITARY REQUIREMENTS.

1.—Public water supply for certain villages and outlying farms.

2.—Improvements to the housing accommodation as detailed above.

3.—Adoption of the Notification of Births Act, and the appointment of a Health Visitor.

EASINGTON RURAL DISTRICT.

JAMES ARTHUR, L.R.C.P., D.P.H., Medical Officer
of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	58,777	56,922
Birth-rate	36·27	34·85
Death-rate	15·12	16·23
Zymotic death-rate ..	1·70	2·40
Phthisis death-rate..	0·66	0·68
Total Tuberculosis death-rate	1·51	1·49
Respiratory diseases death-rate	2·10	2·26
Infant mortality-rate per 1,000 births	153	153

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	370	522
Smallpox	nil.	nil.
Scarlet fever	207	241
Diphtheria	64	107
Fevers (Enteric, &c.) ..	42	102
Puerperal fever	2	3
Cases treated at hospital ..	26	58
Measles	(10)	(46)
Whooping cough	(23)	(3)
Diarrhoea	(35)	(49)

1911 Census Population—60,040.

Milk and Mussels cause infection with enteric fever (see page 26).

GENERAL SANITATION.

Water Supply.—The district was generally satisfactorily supplied. A second storage tank containing 6,000 gallons was erected at Rodridge for the improvement of the supply to Hutton Henry and South Wingate. The distribution in Luke Street, Trimdon, by taps is stated to be insufficient. The water supply to certain isolated dwellings and farms supplied by shallow wells was investigated, and the analyses in every case proved the water to be impure, and a scheme for a proper water supply is under consideration.

Sewerage.—The Thornley and Wheatley Hill works have been extended and are working satisfactorily. Schemes have been sanctioned by the Local Government Board and the construction of a main outfall sewer to the sea draining (1) Easington and Thorpe and Easington Colliery village, and (2) Horden Colliery village has been commenced. Other schemes of a similar nature are being prepared. The sewerage at Wingate has been deferred until the outfall sewer to the sea from Castle Eden Colliery has been completed. During the year 4,663 yards of new sewers were laid.

Scavenging was generally well done except at Easington.

Housing.—(a) New Houses: Plans were approved for 460 new houses at Castle Eden Colliery (187), Wheatley Hill (121), Murton (41), and Easington (29), &c. (b) Insanitary Property: The report refers to a considerable amount of work done during the year under

the Housing, T.P., &c., Act. Houses were closed at Easington (1), Haswell (3), Shotton (7), and Murton (17). Houses were re-constructed at Haswell (4), South Hetton (8), Thornley (43), Wingate (6), and the reconstruction of houses has been promised at Easington (3), Murton (116), and Thornley (2). At Kelloe 10 houses were improved by the ceiling of the attics and the substitution of staircases for stepladders. 585 ash-closets were substituted for ashpit privies at Seaham (206), Monk Hesleden (19), South Hetton (88), Murton (66), Wingate (27), &c. It is stated that action has been taken with respect to 34 wooden huts, which are at present in occupation.

Nuisances.—A number of nuisances were abated by the service of 371 informal notices.

Streets have been made at Thornley (1), and Trimdon (2). Contracts have been let for the making of streets at Station Town (5) and Easington (2).

Common Lodging Houses (2), situated at Easington, were regularly inspected and in one instance the premises were not satisfactory.

Slaughter-houses.—Bye-laws have been prepared but have not yet been sanctioned by the Local Government Board. Seven notices were served to enforce cleanliness.

Dairies and Cowsheds and Milkshops (51).—Structural alterations were made to three cowsheds and notices were served in three instances for defective ventilation and overcrowding, &c. A public water supply was laid into two premises. Cases of infectious disease were dealt with in three instances. In one instance a milk supply was found to be causing the spread of enteric fever but no further cases occurred after the isolation of the infected person and the provision of a better water supply.

Factories (13), *Workshops* (86), and *Bakehouses* (5) were inspected on 418 occasions. Nuisances due to want of cleanliness (21), and want of ventilation (4) were detected and remedied.

SANITARY REQUIREMENTS.

- 1.—More thorough scavenging—the ashpits should be cleansed once a week.
- 2.—Continued conversion into ash-closets of midden-privies with bi-weekly cleansing.
- 3.—Open channels replaced by closed drains and more care of blocked sinks.
- 4.—Complete sewerage system to villages direct to the sea to avoid river pollution.
- 5.—Extension of deep well water supplies wherever shallow wells are used.
- 6.—Repair of all old workmen's dwellings, including the raising of low attics.
- 7.—Extension of Street Works Act, including a modified measure for back streets.
- 8.—A high-pressure steam disinfecter.

HARTLEPOOL RURAL DISTRICT.

T. G. AINSLEY, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	2,555	2,355
Birth-rate	22·70	28·00
Death-rate	10·95	9·34
Zymotic death-rate.. ..	1·56	nil.
Phthisis death-rate.. ..	0·78	0·42
Total Tuberculosis death-rate	2·73	0·42
Respiratory diseases death-rate	0·39	1·27
Infant mortality-rate per 1,000 births	86	45

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	29	23
Smallpox	nil.	nil.
Scarlet fever	26	17
Diphtheria	2	6
Fevers (Enteric, &c.)	nil.	nil.
Puerperal fever	1	nil.
Cases treated at hospital ..	nil.	nil.
Measles	(1)	(nil.)
Whooping cough	(nil.)	(nil.)
Diarrhœa	(2)	(nil.)

1911 Census Population—3,355.

GENERAL SANITATION.

Water.—Attention was given to the water supply of the district, 10 samples being analysed. A new supply has been laid on to one farm and a similar improvement is to be made to a farm at Stranton.

Sewerage.—The sewerage system acted satisfactorily on the whole.

Housing.—Insanitary Property: At Greatham one house was closed and some property at Saltaire Terrace requires improvements.

Housing.—Insanitary Property: At Greatham one house was periodically and found satisfactory.

SANITARY REQUIREMENTS.

Improvements to the housing.

This report is typewritten.

HOUGHTON RURAL DISTRICT.

D. S. PARK, F.R.C.S., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population	24,400	23,700
Birth-rate	39·67	38·69
Death-rate	14·79	14·30
Zymotic death-rate	0·90	1·89
Phthisis death-rate	0·69	0·46
Total Tuberculosis death-rate	1·27	1·18
Respiratory diseases death-rate	3·27	2·53
Infant mortality-rate per 1,000 births	127	116

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	186	190
Smallpox	nil.	nil.
Scarlet fever	130	120
Diphtheria	33	22
Fevers (Enteric, &c.)	13	34
Puerperal fever	1	nil.
Cases treated at hospital	49	17
Measles	(1)	(17)
Whooping cough	(2)	(5)
Diarrhoea	(13)	(8)

1911 Census Population—25,532.

Highest birth-rate in the county (see page 4).

Diphtheria amongst school children at Moorsley (see page 22).

GENERAL SANITATION.

Water Supply.—The district is supplied from a variety of sources, but for the most part by the Sunderland and South Shields, Consett and Weardale, and Lambton Collieries Water Companies. The latter company have laid a new 6 in. main from Herrington New Pit to their reservoir on Herrington Hill, thereby greatly improving the supply. With regard to the eight farms, whose water supplies was adversely reported upon a year ago, a public supply has been laid on in two instances, a fresh supply has been obtained from another spring in one instance, and the springs have been satisfactorily protected in three other instances. At South Farrington the water supply is still unsatisfactory but is receiving attention.

Sewerage.—Three streets at The Freehold have been sewered and the remaining rows are to be dealt with immediately. Sewers were also laid at Beatrice Terrace, Penshaw Staithes, Stanley Terrace, Herrington Burn, and Herrington New Pit. The sewage works are reported to have acted efficiently.

Scavenging was done by contractors but the work was not uniformly well done. “The district is much too large and scattered for one inspector to pay proper attention to the ashpits and to see that the scavenging is properly and efficiently carried out.”

Housing.—(a) New Houses: Plans for 132 houses were passed. (b) Insanitary Property: The demolition of the houses at Middle Rainton which were closed in the previous year is receiving consideration. The report calls attention to the conditions at West Rainton, viz.—Insanitary and insufficient conveniences at Church Street (8 houses), Blacksmith’s Yard (3 houses), Post Office Yard (5 houses), Johnson’s Buildings (23 houses), and Walby’s Yard (4 houses), and dilapidated houses in Blacksmith’s Yard (3 houses), and in the neighbourhood of the Old Hall. At Moorsley “The houses are old and of a very poor class. The spouting is much neglected, and many of the streets and footpaths are unpaved and unchannelled with the result that in wet weather they are almost impassable. At Low Moorsley some of the houses near the pit have cesspools close to the back doors for the slop water; and when they require to be cleaned out the sludge is thrown on to an ashpit which is a hole in the ground, and remains there until the so-called ashpit is cleaned out. At any time, but especially in the hot weather, it can readily be imagined how offensive such places must become. Rats too are about the place and as the surrounding conditions provide them with food and shelter they will be difficult to exterminate. Your Inspector has the matter in hand.”

Streets.—The contract for the work at Penshaw has been completed and a great improvement effected in the neighbourhood. Similar work is required at Grasswell, Shiney Row, New Penshaw, High Pottery Yard, Newbottle, Dubmire, and Black Eden Terrace.

Slaughter-houses (18) and *Dairies and Cowsheds* were systematically inspected and found satisfactory.

Factories and Workshops were found satisfactory, except in one instance, where there was insanitary closet accommodation.

SANITARY REQUIREMENTS.

- 1.—Improved scavenging.
- 2.—Improvements to the housing accommodation.
- 3.—Street works.

LANCHESTER RURAL DISTRICT.

(Lancaster Division).

J. WILSON, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	23,000	23,000
Birth-rate	34.30	37.82
Death-rate	11.73	13.82
Zymotic death-rate ..	1.00	1.65
Phthisis death-rate ..	1.34	1.04
Total Tuberculosis death-rate	1.69	1.30
Respiratory diseases death-rate ..	2.21	3.38
Infant mortality-rate per 1,000 births	94	132

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	183	192
Smallpox	nil	nil
Scarlet fever	124	117
Diphtheria	35	44
Fevers (Enteric, &c.)	9	13
Puerperal fever	nil	nil
Cases treated at hospital ..	152	151
Measles	(1)	(4)
Whooping cough	(nil)	(7)
Diarrhoea	(9)	(14)

1911 Census Population for whole district—32,237.

GENERAL SANITATION.

Water was satisfactorily supplied to the whole district by the Weardale and Consett Water Company.

Scavenging is done by a contractor at Esh, but in the rest of the district by the colliery owners, and in a few instances by the occupiers themselves. The refuse is, for the most part, disposed of on land.

Sewerage.—Offensive conditions at Hill Top, near Esh, are referred to and the sewerage of this place is again recommended.

Housing.—(a) New Houses : 85 were erected and occupied. (b) Insanitary Property : Seven houses were closed, one of which has since been repaired and reoccupied. 94 yards were cemented, and a number of ash-closets were substituted for midden privies at Burnhope and Langley Park Colliery. The report deals briefly with the sanitation in the various villages in the district and attention is called to a number of defectively paved yards or insanitary conveniences at Craghead, Langley Park (Logan Street), and Lanchester (Victoria Street).

Nuisances.—672 were detected and 646 abated ; 26 cases of overcrowding were dealt with.

Streets.—A number of streets were made at Langley Park, and it is recommended that all private streets in the district should be similarly improved.

Dairies and Cowsheds (150).—There are 105 cowkeepers and 916 dairy cattle in the district. Some of the byres are in a defective condition, but several new byres are to be built. Dr. Wilson again refers to the objectionable accumulations of manure in the vicinity of byres.

Slaughter-houses and Workshops were periodically inspected and found satisfactory.

SANITARY REQUIREMENTS.

1.—Sewerage of Hill Top.

2.—Cementing of yards and abolition of ashpit-privies, as detailed above.

3.—Street works.

LANCHESTER RURAL DISTRICT.

(Medomsley Division.)

W. T. BOLTON, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	9,109	9,109
Birth-rate	30.40	32.27
Death-rate	13.17	14.60
Zymotic death-rate	0.76	1.09
Phthisis death-rate	0.43	0.98
Total Tuberculosis death-rate	0.65	2.30
Respiratory diseases death-rate	2.96	2.52
Infant mortality-rate per 1,000 births	122	105

Infectious Diseases—Cases and (Deaths).

	1910	1909.
Total notifications	31	66
Smallpox	nil	nil
Scarlet fever	17	39
Diphtheria	6	15
Fevers (Enteric, &c.)	nil	5
Puerperal fever	nil	nil
Cases treated at hospital	14	44
Measles	(1)	(nil)
Whooping cough	(nil)	(3)
Diarrhoea	(4)	(3)

1911 Census Population for whole district—32,237.

In November the death of Dr. Bolton occurred, when Dr. John Wilson was appointed his successor, and in subsequent years the rural district will be dealt with as a whole and not arranged in divisions. For this year Dr. Wilson gives the vital statistics for this division but simply states "Owing to the inclemency of the weather it has been impossible to make an inspection of the western district of the rural district of Lanchester," and no particulars as to the sanitary state of the district are available.

SEDFIELD RURAL DISTRICT.

FREDERICK HUNTON, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	32,488	31,875
Birth-rate	33.88	34.13
Death-rate	13.48	13.33
Zymotic death-rate	1.69	0.75
Phthisis death-rate	0.67	0.69
Total Tuberculosis death-rate	1.32	1.47
Respiratory diseases death-rate	1.81	1.38
Infant mortality-rate per 1,000 births	149	139

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	174	140
Smallpox	nil	nil
Scarlet fever	100	70
Diphtheria	33	24
Fevers (Enteric, &c.)	32	23
Puerperal fever	1	3
Cases treated at hospital	40	28
Measles	(14)	(nil)
Whooping cough	(nil)	(4)
Diarrhoea	(26)	(11)

1911 Census Population—33,711.

Complications of Measles (see page 32).

GENERAL SANITATION.

Water was satisfactorily supplied. Samples from seven wells were analysed and one well, yielding an unsatisfactory supply, was closed.

Sewerage.—New works have been constructed at North Side, Ferryhill, and at Windlestone Row the works have been enlarged. The sewerage system has been increased to the extent of 1,500 yards.

Scavenging was done in a very inefficient manner, and it is recommended that the Council should make themselves responsible for the carrying out of this work.

Housing.—The report contains no reference to the housing of the district in general, but Dr. Hunton reprints a special report in which he condemns several houses at Trimdon Colliery, which have been improved in accordance with the requirements of his Council. Dr. Hunton makes it clear that in spite of the improvements the houses in a number of respects fail to meet the requirements of the bye-laws at present in force in the district.

Nuisances.—331 were abated.

Streets.—Six streets were made at Ferryhill and one at Trimdon Colliery.

Common Lodging Houses.—Some unsatisfactory premises at West Cornforth were closed. The rest of the houses were regularly inspected and found satisfactory.

Dairies and Cowsheds were inspected regularly and 115 notices were served to enforce cleanliness and lime-washing.

Factories and Workshops (48) were the subject of 105 inspections and three notices were served for defective closet accommodation.

SANITARY REQUIREMENTS.

1.—More efficient scavenging.

2.—Improvements to the housing accommodation.

SOUTH SHIELDS RURAL DISTRICT.

W. ARMSTRONG, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	12,672	12,147
Birth-rate	30·33	33·01
Death-rate	13·32	14·90
Zymotic death-rate	1·49	1·72
Phthisis death-rate	0·78	0·98
Total Tuberculosis death-rate	1·59	1·96
Respiratory diseases death-rate	2·75	1·81
Infant mortality-rate per 1,000 births	118	148

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	119	90
Smallpox	3	nil
Scarlet fever	57	43
Diphtheria	27	23
Fevers (Enteric, &c.)	11	3
Puerperal fevers	3	1
Cases treated at hospital ..	56	31
Measles	(nil)	(nil)
Whooping cough	(5)	(13)
Diarrhoea	(10)	(4)

1911 Census Population—14,483.

GENERAL SANITATION.

Water Supply.—With the exception of some outlying farms which derive their supplies from wells not altogether satisfactory, the whole district is supplied by the Sunderland and South Shields Water Company.

Sewerage.—Nothing has yet been done to remedy the insufficiency of sewerage and drainage reported in the two previous annual reports of the Medical Officer of Health. This is especially noticeable in Langholme Road, East Boldon, where “the contents of the sewers have been observed to boil up and overflow” after a heavy rainfall, whilst after a spell of fine weather they have been found to be more than half full of crude sewage, but the matter has been the subject of a special report to the Council by their Surveyor. 890 yards of sewer extensions have been laid down during the year. The Marsden sewer outlet is to be extended and buried in cement concrete. The main sewers at Whitburn, Cleadon, and Monkton remain unventilated. The sewers at Boldon Colliery have insufficient fall and are not satisfactorily laid, and the surface drainage requires improvement.

Scavenging.—This is stated to have been fairly well done during the year. 84 notices were served for neglect.

Housing.—(a) New Houses: 310 were built at Boldon Colliery (283) (125 double houses in flats—Watts Estate), at Marsden Colliery (2), Cleadon (6), Harton (8), and in Boldon Parish (11), and

96 were occupied. Reference is made in the report to the correspondence which has passed between the County Council and the R.D.C. regarding 250 flats erected on Watts Estate and Dr. Armstrong adds "I have only to say that according to modern ideas "these houses are not conducive to good health." (b) *Insanitary Property*: Closing orders were made respecting dwellings at Whitburn, in Chick Lane (6) and Stafford's Lane (8), of which one has been closed and 13 are being repaired according to plans approved by the Council. A cottage at Harton was closed as unfit for habitation. At Boldon Colliery the foundations of several rows of houses have been protected by the laying of cement footpaths. A number of insanitary properties have been repaired and attended to and 96 ash-closets have been substituted for privy middens, whilst 17 ash-closets and privies have been converted into water-closets.

Nuisances.—263 informal and 271 formal notices were served and 383 nuisances abated.

Streets.—Several private streets in Whitburn are being concreted.

Dairies and Cowsheds (85) were systematically inspected and the majority found to be in a satisfactory condition. The three farms mentioned in the previous report as being unsatisfactory, are now in a thoroughly sanitary condition. In some farms it was found that the dairy was also used as a pantry but this practice has been discontinued. A proper water supply is needed for North Follamsby farm and improvements of one kind or another are required for a number of farms and buildings scheduled in the report.

Slaughter-houses were visited systematically but it was impossible to inspect at times of slaughtering throughout the district.

Factories and Workshops (16) received 34 inspections and three defects of cleanliness and sanitary accommodation were found and remedied.

SANITARY REQUIREMENTS.

- 1.—An additional ward at the isolation hospital.
- 2.—Enlargement of sewers at Boldon.

3.—Relaying of main drains in the back streets at Boldon Colliery with more gradient.

4.—Back street paving throughout the district.

5.—Public urinals throughout the district.

6.—Attention to the Marsden main sewer outfall.

STOCKTON RURAL DISTRICT.

J. W. BLANDFORD, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	19,211	19,081
Birth-rate	25·76	24·84
Death-rate	11·39	12·47
Zymotic death-rate	1·09	2·04
Phthisis death-rate	0·36	0·41
Total Tuberculosis death-rate	0·98	0·68
Respiratory diseases death-rate	2·03	2·04
Infant mortality-rate per 1,000 births	86	122

Infectious Diseases—Cases and (Deaths.)

	1910.	1909.
Total notifications	130	97
Smallpox	nil	nil
Scarlet fever	58	49
Diphtheria	51	27
Fevers (Enteric, &c.)	9	11
Puerperal fever	2	1
Cases treated at hospital ..	53	34
Measles	(1)	(17)
Whooping cough	(4)	(12)
Diarrhoea	(11)	(5)

1911 Census Population—17,527.

Lowest recorded death-rate for this district (see page 5).

GENERAL SANITATION.

Water was satisfactorily supplied to the greater part of the district by the Tees Valley Water Board and there was no shortage at Cowpen Bewley or in the agricultural parts of the district, which are dependent upon pumps.

Sewerage.—It is hoped that the drainage scheme for Norton will be carried out this summer. The various sewerage systems are reported to have acted satisfactorily.

Scavenging was well done by contractors in the greater part of the district.

Housing (a) New Houses: 26 were built in the parishes of Norton (9), Billingham (10), and in the agricultural area (7). (b) Insanitary Property: No reference is made in the report to the housing of the district.

Slaughter-houses and Dairies and Cowsheds were periodically inspected and in the report of the Inspector of Nuisances, which is appended, it is mentioned that two new byres were erected, and improvements with respect to paving and ventilation were effected at four farms.

Workshops (24) and Outworkers (2) were the subject of 56 inspections and nuisances due to want of cleanliness (3) and insufficient sanitary accommodation (2) were detected and remedied.

SANITARY REQUIREMENTS.

A drainage scheme for Norton.

SUNDERLAND RURAL DISTRICT.

ROBERT STOBO, M.B., B.Hy., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	30,682	30,129
Birth-rate	31·01	33·58
Death-rate	11·78	13·14
Zymotic death-rate ..	1·95	1·36
Phthisis death-rate ..	0·52	0·69
Total Tuberculosis death-rate	0·88	1·29
Respiratory diseases death-rate ..	1·92	2·29
Infant mortality-rate per 1,000 births	115	117

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	277	258
Smallpox	nil	nil
Scarlet fever	192	150
Diphtheria	35	42
Fevers (Enteric, &c.) ..	23	39
Puerperal fever	nil	nil
Cases treated at hospital ..	82	89
Measles	(11)	(13)
Whooping cough	(5)	(1)
Diarrhoea	(32)	(16)

1911 Census Population—29,007.

Spread of scarlet fever by mild unrecognised cases (see page 19).

GENERAL SANITATION.

Water.—Practically the whole district is supplied by the Sunderland and South Shields Water Company. The Company's water has been laid on to two outlying farms in the parish of Tunstall, and a supply to a third farm is receiving attention. Water was laid on to houses at New Silksworth and the stand-pipes abolished. Similar improvements are contemplated at Ryhope Colliery. When this work is carried out practically every house in the district will have its own separate water supply.

Scavenging was carefully supervised and was fairly well done by contractors.

Sewerage.—The sewage from the parishes of Ryhope and Hylton passes into the river Wear, and from the rest of the district into the North Sea. The sewerage in Ryhope Colliery, in the parish of Tunstall and in the village of Castletown is unsatisfactory and is receiving attention.

Housing.—(a) New Houses: 28 were erected in the parishes of Fulwell (11), Ryhope (8), Ford (6), and Hylton (3). (b) Insanitary Property: A list of streets which were systematically inspected under the Housing, T.P., &c., Act is given, but the results of the inspections are not mentioned. Ashpit privies were replaced by ash-closets (171), water-closets (23), and four ash-closets were converted into waterclosets.

Nuisances.—616 were abated by the service of 300 formal and 344 informal notices.

Streets.—It is reported that it is the intention of the Council to make streets in the parishes of Tunstall (2), Fulwell (9), Ryhope (8), and Ford (9).

Dairies and Cowsheds.—There are 35 dairy farms with 54 cowsheds housing about 490 cows. Notices were served in about 11 instances to improve the lighting and in one case it was necessary to prosecute for deficient air-space in the byre. The herds were again examined by Mr. Mitchell, Veterinary Surgeon, and three cows were detected to be suffering from tuberculosis of the udder. In all cases the cows were isolated.

Workshops (31) and Bakehouses (21) were inspected on 68 occasions and notices were served in four instances with satisfactory results.

SANITARY REQUIREMENTS.

- 1.—Improvements to the housing in the parish of Ryhope.
- 2.—Making and paving of streets.

3.—Ventilation and improvements to the sewerage system in the parish of Tunstall.

4.—Additional hospital accommodation for cases of diphtheria.

5.—Accommodation for the treatment of advanced cases of consumption.

WEARDALE RURAL DISTRICT.

(Derwent Division).

ANDREW VEITCH, M.D., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	450	460
Birth-rate	17·77	26·08
Death rate	8·44	19·56
Zymotic death-rate	nil	nil
Phthisis death-rate	nil	nil
Total Tuberculosis death-rate	nil	nil
Respiratory diseases death-rate	nil	2·17
Infant mortality-rate per 1,000 births	125	nil

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	2	1
Smallpox	nil	nil
Scarlet fever	2	1
Diphtheria	nil	nil
Fevers (Enteric, &c.)	nil	nil
Puerperal fever	nil	nil
Cases treated at hospital ..	No hospital	
Measles	(nil)	(nil)
Whooping cough	(nil)	(nil)
Diarrhoea	(nil)	(nil)

GENERAL SANITATION.

Water Supply.—The villages of Edmondbyers and Roughside have public supplies; the remainder of the district has a pure and abundant supply from springs.

Sewerage.—The villages are sufficiently drained and the drains are usually well flushed by heavy rainfalls.

Scavenging.—The refuse is satisfactorily disposed of as manure or is thrown on to waste land on the moors. There are two water-closets in the district, the rest of the houses being provided with privies.

Housing.—Dr. Veitch says:—“This is ample, many of the “houses being unoccupied. A few of the older houses are built “back-to-back.” In two houses at Roughside some of the rooms

are damp while in other two overcrowding was found to exist. One room in a farm house at Edmondbyers is damp.

Nuisances.—None.

Milk Supply.—There are no milkshops though milk is disposed of to neighbours by persons who keep cows.

There are no lodging houses, factories, or workshops in the district.

SANITARY REQUIREMENTS.

None mentioned.

WEARDALE RURAL DISTRICT.

(Stanhope Division).

JAMES BANNERMAN, M.B., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	2,615	2,615
Birth-rate	19·12	27·53
Death-rate	9·17	16·44
Zymotic death-rate ..	1·14	0·76
Phthisis death-rate ..	0·76	1·52
Total Tuberculosis death-rate	0·76	2·67
Respiratory diseases death-rate	0·76	2·29
Infant mortality-rate per 1,000 births	80	14

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	61	13
Smallpox	nil	nil
Scarlet fever	42	nil
Diphtheria	8	7
Fevers (Enteric, &c.) ..	2	nil
Puerperal fever	nil	nil
Cases treated at hospital ..	No hospital	
Measles	nil	(nil)
Whooping cough	(1)	(nil)
Diarrhœa	(nil)	(nil)

GENERAL SANITATION.

Water Supply.—This continues to be excellent. The main at Frosterley has been extended and the supply has been laid into three houses and is being laid into other two. A new supply is being laid into the Inn at Rookhope.

Sewerage.—The Frosterley, Hill End, Crawleyside and Rookhope Works have again been satisfactory. The Rookhope sewer has been extended.

Housing.—One new house was being built at Rookhope and one large dwelling house at Frosterley was converted into two.

Nuisances.—A few were reported and abated.

Factories and Workshops.—At the quarries the men work under hygienic conditions. There are no workshops in the district.

SANITARY REQUIREMENTS.

None mentioned.

WEARDALE RURAL DISTRICT.

(St John's Division).

JOHN EASTON, L.R.C.P., Medical Officer of Health.

Vital Statistics.

	1910.	1909.
Estimated Population ..	3,186	3,186
Birth-rate	17.57	21.34
Death-rate	16.94	19.77
Zymotic death-rate	nil	1.57
Phthisis death-rate	1.25	1.57
Total Tuberculosis death-rate	3.13	3.14
Respiratory diseases death-rate	0.94	1.25
Infant mortality-rate per 1,000 births	53	102

Infectious Diseases—Cases and (Deaths).

	1910.	1909.
Total notifications	9	12
Smallpox	nil	nil
Scarlet fever	nil	4
Diphtheria	7	3
Fevers (Enteric, &c.)	1	nil
Puerperal fever	nil	nil
Cases treated at hospital ..	No hospital	
Measles	(nil)	(nil)
Whooping cough	(nil)	(4)
Diarrhoea	(nil)	(nil)

GENERAL SANITATION.

The Water Supply was satisfactory. A new brick tank is being built at Newhouse and the supplies to West Black Dene and Wear-dale Place are now satisfactory. At Lanehead 330 yards of sanitary pipes conveying the water from the moorland was replaced by lead-jointed cast-iron pipes.

Sewerage.—The sewage from the villages of Cowshill, Wearhead, Ireshopeburn, St. John's Chapel, and Westgate is satisfactorily dealt with on land and a water cart has been provided for the purpose of flushing the sewers at these places monthly.

Housing.—One new house was erected at Westgate and two at Daddryshields and certain other buildings have been remodelled.

Nuisances.—A few were detected and remedied.

Cowsheds.—Two small cowbyres at Burnhope were condemned as unfit for the purpose and the owners have been requested to erect new byres.

SANITARY REQUIREMENTS.

- 1.—Refuse tips for the different villages.
- 2.—The continuance of the work of improving the cow-byres.
- 3.—The distribution to the public of information as to the prevention of consumption.

WEARDALE RURAL DISTRICT. (Wolsingham Division).

R. H. O. GARBUTT, L.R.C.P., Medical Officer of Health.

Vital Statistics,

	1910.	1909.
Estimated Population ..	3,600	3,600
Birth-rate	20·27	22·77
Death-rate	12·22	11·11
Zymotic death-rate	0·55	nil
Phthisis death-rate	nil	0·55
Total Tuberculosis death-rate ..	0·27	1·10
Respiratory diseases death-rate	0·83	1·94
Infant mortality-rate per 1,000 births	82	85

Infectious Diseases—Cases and (Deaths)

	1910.	1909.
Total notifications	46	70
Smallpox	nil	nil
Scarlet fever	37	67
Diphtheria	1	1
Fevers (Enteric, &c.)	1	nil
Puerperal fever	nil	nil
Cases treated at hospital ..	No hospital	
Measles	(nil)	(nil)
Whooping cough	(1)	(nil)
Diarrhoea	(nil)	(nil)

GENERAL SANITATION.

Water Supply.—512 houses in Wolsingham are supplied by the Weardale and Consett Water Company and the villages of White Kirkley and Thornley are supplied from stand-pipes.

Sewerage.—The sewage disposal works throughout the district were inspected regularly and found satisfactory and the sewers were regularly flushed.

Scavenging was satisfactorily done and it is recommended that this work should be undertaken during the night but the opinion is expressed that a covered cart would to some extent remedy the nuisance arising from daytime scavenging.

Housing.—(a) New Houses: Two were erected. (b) Insanitary Property: The drainage of a house was found to be seriously defective and a proper drain was constructed. Three cases of overcrowding occurred, all of them being abated after inspection.

Nuisances.—Many minor nuisances were found and abated after attention was drawn to them.

Cowsheds.—New and satisfactory cowbyres were erected at the Upper Town and at High Wiserley Farm, and two old byres at High Redgate were improved. High Wiserley Farm is without a proper water supply.

Factories and Workshops were inspected and found satisfactory.

SANITARY REQUIREMENTS.

1.—An improved water supply to High Wiserley Farm.

2.—Scavenging at night-time, or a covered cart for the removal of the refuse.

PORT SANITARY DISTRICTS.

HARTLEPOOL PORT.

S. BIGGART, M.D., Medical Officer of Health.

Hospital.—The number of patients admitted into the hospital was 76 as compared with 107 in the previous year. Of these seven cases were removed from vessels [smallpox (1), typhoid fever (1), beri beri (3), and ophthalmia (2)], the remainder being patients from the boroughs of West Hartlepool (63), Hartlepool (3), and from the Union Workhouse (3). The hospital is stated to be in good working order and repair, and its accommodation is sufficient for the present needs of the district.

Inspection of Ships.—Seven cases of infectious disease as mentioned above were imported by vessels arriving at the port. 88 vessels were inspected by the Medical Officer of Health and three re-visits paid. The vessels inspected included 21 with sickness on board, 59 which came from infected or suspected ports and four having unsound food for cargo. A number of ships arrived from the Baltic during the year and in view of the reappearance of cholera in certain Russian ports a strict watch was maintained to prevent the introduction of this disease into the Hartlepoons. The number of vessels inspected by the Port Sanitary Inspectors was 1,611, with 197 re-visits, the nationality of the vessels being 725 British, 281 Swedish, 194 Norwegian, 136 Danish, 119 German, 57 Russian, 56 Dutch, and 20 Spanish, &c.

Structural and Sanitary Defects.—193 cases of structural and sanitary defects were discovered and all were remedied; 44 of the e were dirty forecastles and deckhouses, 13 of defective ventilation, five of defective drainage, and six of dirty bedding, &c.

RIVER TYNE PORT.

W. EDMUND HARKER, M D., D.Hy., Medical Officer
of Health.

Diseases on Shipboard.—The following cases were reported :—

	On voyage.	On and after arrival
Smallpox and suspected Smallpox...	2	2
Measles	3	—
Typhus fever	2	—
Scarlet fever	—	4
Enteric fever	17	9
Cholera	2	—
Choleraic diarrhœa, etc.	11	2
Plague or suspected Plague	—	2
Malarial fever	43	6
Dysentery	2	—
Beri Beri	16	6
Influenza	14	

56 vessels were inspected by the Medical Officer of Health on account of reported or suspected sickness, and a list of the vessels so boarded, giving their nationality, port of departure, nature of sickness, and general remarks, is given in the report. During the year 29 cases were treated in the floating hospital. All were removed from vessels and only one terminated fatally—a case of beri beri.

Vessels from Infected or Suspected Ports.—1,829 vessels were boarded by the Port Sanitary Officers on account of their coming directly or otherwise from foreign ports infected or suspected to be infected with cholera, yellow fever, plague, or smallpox. The names of infected or suspected ports are given in the report.

Emigrants.—The number of known emigrants passing through the port during 1910 was 7,756, all of whom were bound for America. All emigrant vessels were inspected and kept under supervision and information as to emigrants debarking and proceeding overland to other British ports was as hitherto forwarded to the respective ports.

General Sanitary Work.—The number of vessels inspected by the Port Inspectors was 9,387, and in addition visits to 18 waterboats were paid. Of the vessels inspected 5,583 were British, 1,080 Norwegian, 663 German, 544 Danish, 443 Swedish, 310 Dutch, and 298 Spanish, &c. In 423 vessels there were structural defects and in 348 dirty conditions. Details of the structural defects are given in the report. 1,552 vessels coming from foreign ports were inspected. Special cargoes inspected numbered 971, the majority of them (762) being fish.

Water Supply.—The water-boats were examined as usual and their tanks found to be in good condition, while the drinking water of 56 vessels which came from ports infected or suspected to be infected with cholera was changed and the tanks purified.

Disinfection.—16 vessels and lots of clothing and bedding were disinfected, while 442 old beds were burnt and four lots of filthy clothing destroyed on account of infection. Two smoke nuisances were detected and the offender in each instance communicated with, while the cleansing of 53 foul fishing boats was performed as usual under the supervision of the inspectors.

TABLE A.

TABLE GIVING POPULATION, BIRTH-RATE, DEATH-RATE, &C., WITHIN THE URBAN DISTRICTS OF THE
ADMINISTRATIVE COUNTY OF DURHAM.

URBAN DISTRICTS.	Medical Officer of Health.	Area in Acres.	Population 1900 (Estimated)	Births.	Deaths.	Birth-rate	Death- rate.	Zymotic death- rate.	Infant Mortality per 1,000 Births.	Phtthisis death- rate.	Total Tubercu- losis Death- rate.	Lung Diseases death- rate.	Number of Cases Notified.	Hospital accommo- dation?	Number of cases removed to Hospital.	Percent- age of Notified cases removed to Hospital.	Deaths occurring within District, excluded.	Deaths occurring outside District, included.
BOROUGHES.																		
Darlington	J. Lawrence, M.D.	3956	53000	1451	709	27·39	13·38	1·11	104	0·77	1·26	1·64	443	Yes.	408	92·1	26	17
Durham	A. M. Vann, M.R.C.S.	1065	17200	444	274	25·81	15·93	1·28	117	1·16	2·03	2·38	46	Yes.	28	60·8	73	7
Hartlepool	J. Rawlings, M.R.C.S.	735	24000	650	347	27·08	14·45	1·25	160	0·62	1·29	2·58	76	Yes.	3	3·9	27	41
Jarrow	J. M. Nicoll, M.B.	1064	34815	971	546	27·88	15·68	2·41	126	1·37	1·75	3·15	199	Yes.	52	26·1	6	51
Stockton	Thomas Horne, M.D.	3031	54629	1469	818	26·89	14·97	1·17	126	1·26	2·12	3·22	350	Yes.	256	73·1	38	17
URBAN DISTRICTS.																		
Annfield Plain	T. Benson, L.R.C.P.	3489	16900	574	204	33·96	12·07	0·94	109	0·65	1·53	2·01	157	Yes.	93	59·2	...	17
Barnard Castle	A. H. Sevier, M.B.	560	4606	112	71	24·31	15·41	0·43	80	1·30	2·17	1·30	28	Yes.	Nil.	Nil.	7	2
Benfieldside	Wm. Allen, M.D.	1525	8900	240	127	30·00	15·87	0·87	112	0·87	2·00	2·00	30	Yes.	9	30·0	...	8
Bishop Auckland ...	T. A. McCullagh, M.R.C.S....	691	13478	403	184	29·90	13·65	0·44	99	0·88	1·85	1·92	73	Yes.	7	9·5	53	6
Blaydon	H. Morrison, M.B., B.S., B.Hy.	9323	29200	1101	432	37·70	14·79	3·01	147	0·85	1·26	2·29	219	Yes.	135	61·6	9	13
Brandon and Byshottles	H. Smith, M.D.	6669	18674	594	244	31·80	13·06	1·39	143	0·69	1·06	2·62	100	Yes.	42	42·0	...	19
Chester-le-Street ...	D. Duncan, M.B.	2511	15651	485	200	30·98	12·77	1·78	107	0·83	1·46	1·59	36	Yes. †	1	2·7	30	4
Consett	A. D. M. Macintyre, M.B....	1005	11349	324	158	28·55	13·92	0·88	114	1·49	1·76	2·64	19	Yes.	5	26·3	2	17
Crook	A. Mackay, M.D.	4056	12000	407	153	33·91	12·75	0·75	93	0·50	0·83	3·41	137	Yes.	72	52·5	...	15
Felling	W. E. Peacock, M.D., B.Hy.	2684	28323	905	369	31·95	13·02	1·02	110	0·70	1·23	2·61	137	Yes.	Nil.	Nil.	...	30
Hebburn	A. M. G. Walker, L.R.C.P....	1241	23577	709	310	30·07	13·14	1·65	112	1·10	1·56	2·66	167	Yes.	85	50·8	...	25
Hetton-le-Hole	J. Adamson, M.D.	1617	15000	570	191	38·00	12·73	0·66	110	0·80	1·60	1·60	78	Yes.	40	51·2	...	16
Houghton-le-Spring.	D. S. Park, F.R.C.S.	1551	10250	299	183	29·17	17·85	0·68	160	0·87	1·36	3·90	85	Yes.	30	35·3	14	3
Leadgate	Wm. Allen, M.D.	1836	4900	166	81	33·87	16·53	0·81	156	1·22	2·04	4·89	9	Yes.	2	22·2	...	2
Ryton	James W. Smith, M.D.	5169	12425	452	153	36·37	12·31	1·77	97	0·56	1·04	1·60	95	Yes.	24	25·2	...	1
Seaham Harbour ...	L. Gerald Dillon, M.D.	1101	15000	546	222	36·40	14·80	1·33	122	0·93	1·93	2·54	27	Yes.	13	48·1	...	22
Shildon	S. Fielden, M.D.	1066	14272	432	185	30·26	12·96	1·12	106	0·84	1·61	1·89	89	Yes.	53	59·5	...	...
Southwick-on-Wear.	John J. Carruthers, M.B. ...	856	15148	464	221	30·63	14·58	1·45	137	0·66	0·99	2·90	50	Yes.	34	68·0	...	25
Spennymoor	W. Mussellwhite, M.R.C.S., D.P.H.	3388	16930	695	250	41·05	14·76	1·71	136	1·00	1·41	2·65	145	Yes.	101	69·6	...	18
Stanhope	John Gray, M.B.	216	2015	39	25	19·35	12·40	0·49	205	0·99	0·99	0·99	28	No. *	Nil.	Nil.	8	...
Stanley	T. Benson, L.R.C.P.	3593	23500	849	306	36·12	13·02	0·80	137	0·76	2·04	1·70	152	Yes.	136	89·4	...	26
Tanfield	T. Benson, L.R.C.P.	4779	10600	329	110	31·03	10·37	0·84	106	0·37	0·94	1·13	131	Yes.	92	70·2	13	5
Tow Law	J. H. Naismith, M.D.	477	4371	133	46	30·42	10·52	0·91	112	0·45	1·14	0·91	34	Yes.	15	44·1	...	...
Whickham	Andrew Smith, M.D.	5914	17261	552	223	31·97	12·91	1·79	115	0·57	1·04	1·39	137	Yes.	66	48·1	...	16
Willington	R. E. Brown, L.R.C.P.	3793	7980	273	117	34·21	14·66	2·38	146	0·50	0·62	2·88	54	Yes.	41	75·9	...	13

* Hospital accommodation for small-pox cases only. † In this district arrangements have been made by which fever patients may be removed to the hospital in the adjoining rural district.

TABLE A1.

TABLE GIVING THE DEATHS AT CERTAIN AGES AND FROM CERTAIN SPECIFIED CAUSES WITHIN THE RURAL DISTRICTS OF THE
ADMINISTRATIVE COUNTY OF DURHAM.

RURAL DISTRICTS.	DEATHS AT SUBJOINED AGES.							DEATHS FROM SUBJOINED CAUSES.																														
	At all ages.	Under 1 Year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Croup.	Croup.	Fevers.			Diarrhoea.	Enteritis.	Gastritis.	Puerperal Fever.	Erysipelas.	Other Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism, Cirrhosis of Liver.	Venereal Diseases.	Premature Birth.	Diseases and Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	All other Causes.	
														Typhus.	Enteric.	Other Continued.																						Epidemic Influenza.
Darlington	694	152	72	27	39	220	184	...	14	7	11	3	1	...	1	...	5	23	4	...	1	2	7	41	26	44	55	29	3	22	4	1	32	6	78	13	6	255
Durham	274	52	24	7	15	103	73	...	...	...	2	1	...	...	2	...	...	17	3	2	...	...	...	20	15	15	20	20	1	3	2	1	5	3	29	4	5	104
Hartlepool	347	104	43	15	19	105	61	...	...	2	9	3	1	..	1	...	6	15	2	2	1	1	...	15	16	18	49	13	...	3	...	...	14	1	46	12	2	115
Jarrow	546	123	93	25	25	176	104	...	24	...	24	13	2	...	1	...	4	22	1	1	...	1	...	48	13	36	42	68	...	6	3	5	18	2	44	16	4	148
Stockton	839	186	96	37	51	276	193	...	13	3	12	8	...	...	7	...	7	21	9	...	4	1	...	69	17	54	84	85	7	4	5	2	27	5	66	35	4	260
Annfield Plain	204	64	24	7	14	63	32	...	4	1	...	1	...	...	1	...	...	9	1	..	..	1	...	11	15	9	15	19	...	1	2	...	7	4	16	8	...	79
Barnard Castle	78	9	7	1	2	27	32	...	...	...	...	1	3	...	1	...	...	...	...	...	...	...	6	4	8	3	3	...	1	2	...	4	...	12	2	1	27	
Benfieldside	127	27	11	4	4	45	36	...	...	..	1	...	...	...	...	...	1	6	...	1	1	1	...	7	9	6	2	14	...	...	4	...	1	...	17	3	1	52
Bishop Auckland ...	178	36	16	6	6	61	53	...	...	1	...	1	1	...	...	...	3	4	3	...	1	...	...	12	13	7	19	5	2	...	5	1	6	...	20	3	...	71
Blaydon	432	162	77	18	22	88	65	...	14	5	9	4	2	...	2	...	2	54	3	2	...	...	...	25	12	18	25	40	2	1	1	...	35	2	20	10	4	140
Brandon & Byshottles	244	85	32	13	11	60	43	...	...	2	1	8	...	...	2	...	4	13	8	...	1	...	...	13	7	6	24	25	...	1	...	...	10	1	13	5	1	99
Chester-le-Street ...	199	52	24	4	15	57	47	..	..	...	9	3	...	...	...	...	16	...	...	...	...	...	13	10	10	8	17	...	...	3	1	10	2	21	7	1	68	
Consett	158	37	16	3	8	63	31	...	4	...	...	...	...	...	...	...	6	6	2	...	...	...	17	3	3	5	24	1	2	...	...	6	3	12	8	1	55	
Crook	153	41	10	3	8	51	40	...	...	4	...	1	...	...	4	...	1	...	3	...	...	...	6	4	7	24	17	...	...	...	...	6	3	23	7	1	42	
Felling	339	100	39	14	29	93	64	...	3	2	7	2	1	...	2	...	2	13	4	...	1	2	...	20	15	17	39	35	...	...	...	1	28	3	33	7	...	102
Hebburn	310	80	51	24	21	85	49	...	5	1	14	5	1	...	...	...	2	14	4	...	1	2	...	26	11	16	22	41	...	...	...	...	13	...	32	5	2	93
Hetton-le-Hole	191	63	19	8	7	48	46	...	...	...	...	...	...	...	1	...	...	9	...	1	1	...	...	12	12	11	9	15	...	...	1	...	40	4	9	7	...	59
Houghton-le-Spring.	183	48	30	2	5	54	44	..	...	...	3	1	..	...	1	...	...	2	1	...	...	...	...	9	5	5	16	24	...	...	2	...	1	1	22	4	...	86
Leadgate	81	26	12	3	5	21	14	..	1	...	1	...	...	...	...	...	1	2	...	...	...	...	6	4	2	11	13	...	...	...	...	2	...	9	2	...	27	
Ryton	153	44	23	7	9	39	51	...	1	2	7	1	...	...	1	...	...	10	...	...	...	...	...	7	6	11	11	8	1	...	1	1	12	1	14	5	...	53
Seaham Harbour ...	222	67	39	12	10	53	41	...	7	1	1	1	1	...	...	...	2	10	..	...	...	...	...	14	15	11	15	23	...	...	...	1	17	1	18	14	...	70
Shildon	185	46	27	7	9	54	42	...	...	...	2	3	1	...	4	...	2	7	...	...	...	...	12	11	9	25	1	1	1	1	2	2	...	21	2	...	78	
Southwick-on-Wear.	221	65	46	12	11	49	38	...	2	...	4	1	1	...	...	...	15	6	...	...	...	1	10	5	11	17	27	...	...	1	...	13	...	18	7	1	81	
Spennymoor	250	95	29	4	8	73	41	...	2	1	6	1	...	...	...	...	19	2	...	4	1	...	17	7	10	21	23	1	6	4	1	17	3	20	8	1	75	
Stanhope	25	8	...	...	1	5	11	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	2	...	1	...	...	3	...	8	2	...	5	
Stanley	306	117	35	8	16	87	43	...	2	6	1	3	...	...	3	...	...	4	...	1	2	...	...	18	30	9	19	20	1	2	5	...	32	2	31	5	2	108
Tanfield	110	35	10	6	5	27	27	...	...	...	1	2	...	...	2	...	...	4	...	...	...	...	4	6	6	4	8	...	4	2	...	6	1	8	3	1	48	
Tow Law	46	15	2	4	2	14	9	...	...	...	1	1	...	...	...	...	2	2	...	1	...	...	...	2	3	1	3	1	...	...	...	3	1	2	5	...	18	
Whickham	223	64	33	6	8	65	47	...	4	2	10	2	...	...	4	...	...	9	...	..	...	...	...	10	8	12	14	10	...	1	...	2	13	...	23	9	...	90
Willington	117	40	12	2	5	34	24	...	1	...	...	...	...	...	7	...	6	11	...	...	...	...	4	1	5	17	6	...	1	2	...	4	2	3	5	1	41	
TOTAL	7435	2043	952	289	390	2196	1565	...	101	40	137	70	15	...	47	...	56	337	56	11	18	12	8	476	333	378	618	636	20	60	50	10	387	51	688	223	39	2549

The difference between the total deaths in some districts in this Table and the figures given in Table A. is due to the incompleteness of the statistics in the Annual Reports of the district Medical Officers of Health.

TABLE B.

TABLE GIVING POPULATION, BIRTH-RATE, DEATH-RATE, &C., WITHIN THE RURAL DISTRICTS OF THE
ADMINISTRATIVE COUNTY OF DURHAM.

RURAL DISTRICTS.	Medical Officer of Health.	Area in Acres.	Population (Estimated).	Births.	Deaths.	Birth-rate	Death- rate.	Zymotic death- rate.	Infant Mortality- rate per 1000 Births.	Phthisis death- rate.	Total Tubercu- losis death- rate.	Lung Diseases death- rate.	Number of Cases Notified.	Hospital accommo- dation?	Number of cases removed to Hospital.	Percent- age of Notified Cases removed to Hospital.	Deaths occurring within District, excluded.	Deaths occurring outside District, included.
Auckland	J. G. Willis, L.R.C.P., D.P.H.	57334	61120	1892	852	30.95	13.93	1.21	133	0.35	1.14	2.22	347	Yes.	130	37.4	9	43
Barnard Castle	James C. Neligan, L.R.C.S.	79961	12118	298	154	24.59	12.70	0.66	77	0.66	0.99	1.89	129	Yes.	87	67.4	...	8
Chester-le-Street ...	J. Taylor, M.D., D.P.H.	32429	63869	2341	949	36.65	14.85	1.78	143	0.67	1.28	2.36	353	Yes.	69	19.5	...	35
Darlington	Robert H. Meikle, M.B.	42019	9591	274	134	28.51	13.97	0.82	109	0.93	1.04	1.87	47	Yes.†	16	34.0	...	16
Durham	A. T. Harrison, L.S.A.	31053	29676	1020	497	34.37	16.74	2.19	145	0.84	1.65	2.39	190	Yes.	97	51.0	4	20
Easington	J. Arthur, L.R.C.P., D.P.H.	37018	58777	2132	889	36.27	15.12	1.70	153	0.66	1.51	2.10	370	Yes.	26	7.0	9	38
Hartlepool	T. G. Ainsley, M.D.	19090	2555	58	28	22.70	10.95	1.56	86	0.78	2.73	0.39	29	Yes.†	Nil.	Nil.	128	...
Houghton	D. S. Park, F.R.C.S.	13190	24400	968	361	39.67	14.79	0.90	127	0.69	1.27	3.27	186	Yes.	49	26.3	...	25
Lanchester (Lanchester Div.)	J. Wilson, M.D.	29949	23000	789	270	34.30	11.73	1.00	94	1.34	1.69	2.21	183	Yes.	152	83.0	57	7
Lanchester (Medomsley Div.)	§ W. T. Bolton, L.R.C.P.	21193	9109	277	120	30.40	13.17	0.76	122	0.43	0.65	2.96	31	Yes.	14	45.1	...	1
Sedgefield	Frederick Hunton, M.D.	45006	32488	1101	438	33.88	13.48	1.69	149	0.67	1.32	1.81	174	Yes.	40	23.0	...	...
South Shields	W. Armstrong, L.R.C.P.	12073	12672	384	169	30.33	13.32	1.49	118	0.78	1.59	2.75	119	Yes.	56	47.0	250	3
Stockton	J. W. Blandford, L.R.C.P.	34539	19211	495	219	25.76	11.39	1.09	86	0.36	0.98	2.03	130	Yes.†	53	40.7	...	14
Sunderland	Robert Stobo, M.B., B.Hy.	6980	30632	950	361	31.01	11.78	1.95	115	0.52	0.88	1.92	277	Yes.	82	29.6	22	36
Weardale (Derwent Division)	Andrew Veitch, M.D.	13144	450	8	2	17.77	8.44	Nil.	125	Nil.	Nil.	Nil.	2	No *	Nil.	...	...	...
Weardale (Stanhope Div.)	James Bannerman, M.B.	24864	2615	50	24	19.12	9.17	1.14	80	0.76	0.76	0.76	61		Nil.	...	...	1
Weardale (St. John's Div.)	John Easton, L.R.C.P.	36096	3186	56	54	17.57	16.94	Nil.	53	1.25	3.13	0.94	9		Nil.	...	...	3
Weardale (Wolsingham Div.)	R. H. O. Garbutt, L.R.C.P.	21532	3600	73	44	20.27	12.22	0.55	82	Nil.	0.27	0.83	46		Nil.	...	...	4

* This district has hospital accommodation for small-pox cases only. † In these districts arrangements have been made by which fever patients may be removed to the hospital in the adjoining urban district. ‡ This rate excludes the deaths under 1 year of age and the births registered in the workhouse. § Dr. Bolton died in December and Dr. J. Wilson was appointed for the whole of the Lanchester Rural District.

TABLE B1.

TABLE GIVING THE DEATHS AT CERTAIN AGES AND FROM CERTAIN SPECIFIED CAUSES WITHIN THE RURAL DISTRICTS OF THE
ADMINISTRATIVE COUNTY OF DURHAM.

RURAL DISTRICTS.	DEATHS AT SUBJOINED AGES.							DEATHS FROM SUBJOINED CAUSES.																															
	At all ages.	Under 1 Year.	1 and under 5	5 and under 15.	15 and under 25	25 and under 65	65 and upwards	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Membranous Group.	Croup.	Fevers.			Epidemic Influenza.	Diarrhoea.	Enteritis.	Gastritis.	Puerperal Fever.	Erysipelas.	Other Septic Diseases.	Phthisis.	Other Tubercular Diseases.	Cancer, Malignant Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Other Diseases of Respiratory Organs.	Alcoholism, Chronic of Liver.	Venereal Diseases.	Premature Birth.	Diseases and Accidents of Parturition.	Heart Diseases.	Accidents.	Suicides.	All other Causes.	
														Typhus.	Enteric.	Other (continued).																							
Auckland	852	253	88	35	41	257	178	...	11	2	9	5	1	...	5	...	12	42	3	...	2	...	...	34	36	43	65	70	1	6	1	1	40	12	67	40	6	338
Barnard Castle	154	23	10	5	12	44	60	...	1	...	...	6	...	...	...	...	3	1	...	...	...	...	...	8	4	8	14	8	1	...	...	...	5	1	17	5	2	70
Chester-le-Street ...	949	339	115	38	48	230	179	...	4	6	18	13	1	...	2	...	4	71	5	...	2	2	9	43	39	26	42	107	2	4	8	3	64	9	68	41	4	352	
Darlington	134	30	14	3	9	51	27	...	2	...	2	1	1	...	...	...	3	3	...	2	...	...	...	9	1	9	7	10	1	...	3	...	3	1	13	5	2	56
Durham	497	148	63	26	27	130	103	..	14	4	9	9	...	...	2	...	4	27	4	...	...	2	...	25	24	16	23	46	2	1	2	...	37	5	40	12	2	187
Easington	889	331	127	42	35	222	132	...	10	4	23	21	1	...	7	...	5	35	12	3	...	1	...	39	50	34	59	64	1	7	3	1	74	19	45	34	3	334	
Hartlepool	31	5	7	1	4	4	10	...	1	...	...	1	...	...	...	...	...	2	...	...	1	...	...	2	5	2	...	1	...	...	...	...	1	...	3	2	...	10
Houghton	361	123	40	12	20	86	80	...	1	1	2	2	1	...	3	13	2	...	1	17	14	25	47	33	5	...	22	5	29	12	...	126
Lanchester (Lanchester Div.)	263	75	30	17	28	58	55	...	1	5	...	5	1	...	2	1	1	9	6	...	...	...	...	31	8	11	23	28	...	...	...	...	12	...	12	12	2	93
Lanchester (Medomsley Div.)	119	34	18	3	5	23	36	...	1	...	...	2	...	...	...	...	...	4	2	...	...	...	...	4	2	4	7	20	...	...	...	...	2	1	12	2	1	55
Sedgefield	438	165	68	18	18	99	70	...	14	2	...	6	...	...	7	...	...	26	4	...	...	...	...	22	21	17	37	20	2	20	2	...	38	5	19	18	...	158
South Shields	169	41	18	9	5	59	37	...	...	...	5	4	...	...	...	...	2	10	1	...	...	...	...	10	10	10	14	20	1	...	1	...	6	3	19	2	...	51
Stockton	219	43	22	11	11	64	68	...	1	...	4	5	...	...	...	...	1	11	..	...	1	...	...	7	12	14	15	21	...	...	3	...	11	3	15	11	2	82
Sunderland	361	110	49	14	16	100	72	...	11	6	5	2	...	..	4	...	5	32	3	...	...	...	6	16	9	21	33	23	3	4	1	...	21	...	28	8	1	119
Weardale (Derwent Division)	2	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
Weardale (Stanhope Div.)	23	4	2	1	2	5	9	..	...	...	1	2	...	...	...	...	...	...	...	...	...	...	...	2	...	2	1	1	...	...	...	...	...	...	4	2	...	8
Weardale (St. John's Div.)	54	2	2	1	3	23	23	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	..	4	6	6	2	1	...	5	...	...	...	2	12	...	...	15
Weardale (Wolsingham Div.)	40	6	5	1	6	10	12	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...	1	4	...	3	...	...	..	...	2	1	6	...	2	18
TOTAL.....	5555	1733	678	237	290	1465	1152	...	72	31	79	84	6	...	32	1	40	286	42	5	7	7	15	273	242	252	389	476	14	47	29	5	338	67	410	206	27	2073	

The difference between the total deaths in some districts in this Table and the figures given in Table B. is due to the incompleteness of the statistics in the Annual Reports of the district Medical Officers of Health.



INSPECTORS' REPORTS - URBAN.

URBAN DISTRICTS.		PUBLIC HEALTH ACTS—NOTICES SERVED AND NUISANCES ABATED.																				WATER, FOOD, AND DRUGS.				PRECAUTIONS AGAINST INFECTIOUS DISEASE.					
		Dwelling-Houses and Schools.		Lodging-houses.	Dairies and Milk-shops.	Cemeteries.	Bakery-houses.	Slaughter-houses.	Alders and Privies.	Deposits of Refuse and Manure.	Water-closets.	Defective Yards.	Defective Traps.	House Drainage.		Water Supply.	Pigsties.	Animals Improperly kept.	Offensive Trades.	Smoke Nuisances.	Other Nuisances.	Totals.	Samples of Water taken for Analysis.	Samples of Water condemned as unfit for use.	Seizures of Unwholesome Food.	Convictions for Exposing or Selling Unwholesome Food.	Lots of Infected Clothing Stowed or Destroyed.	Houses Disinfected after Infection Disease.	Schools Disinfected after Infection Disease.	Prosecutions for Exposure of Infected Persons or Things.	Convictions for Exposure of Infected Persons or Things.
		Formal Notices.	Informal Notices.											No Disconnection from Sewers.	Other Faults.																
DARLINGTON—	Population, 53,000	3	583	1	5	3	5	7	311	26	228	157	41	60	241	1	10	1	1	8	1691	4	...	17	1	379	387	2	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	185	...	...	...	...	...	187	1	35	80	11	25	46	1	1	1	50	624										
J. R. Copping	Nuisances abated after Notice	3	644	1	6	3	5	7	364	27	249	176	46	66	279	1	11	1	1	10	1901										
DURHAM—	Population, 17,200	22	388	9	5	2	3	12	55	8	97	33	8	25	112	1	3	4	1	361	1149	...	...	...	...	1	16	1	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	5	25	...	...	...	...	...	16	1	7	16	6	6	3	1	...	...	1	14	100									
Robert Blythe	Nuisances abated after Notice	22	380	9	5	2	3	12	51	8	97	30	8	23	112	1	3	4	1	361	1134										
HARTLEPOOL—	Population, 24,000	36	52	7	2	1	...	4	20	63	24	10	2	74	70	...	2	...	...	79	446	2	...	2	...	...	67	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	7	...	...	...	...	...	...	6	2	1	...	7	1	...	...	...	1	27										
J. Charlton	Nuisances abated after Notice	36	59	9	2	1	...	4	...	20	69	26	11	2	81	71	...	2	...	80	473										
JARROW—	Population, 34,815	40	45	...	22	4	1	12	41	6	19	20	1	159	31	...	6	...	...	1292	1719	...	...	...	...	204	204	3	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	...	...	2	...	1	...	...	...	...	...	...	4	...	...	...	...	...	7										
John S. Callis	Nuisances abated after Notice	40	40	...	22	4	1	12	41	6	19	20	1	159	31	...	6	...	...	1292	1714									
STOCKTON—	Population, 54,629	39	1672	14	...	...	...	...	1610	...	55	224	141	1	15	19	...	21	8	150	3971	...	...	...	...	...	355	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	895	895									
Wm. C. Crowther	Nuisances abated after Notice	39	1672	14	...	...	...	...	1610	...	55	224	141	1	15	19	...	21	8	150	3971									
ANNFIELD PLAIN—	Population, 16,900	3	62	12	...	1	...	...	29	7	7	48	...	...	14	...	1	1	...	3	188	...	...	...	...	6	...	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	8	...	...	...	...	...	3	...	1	3	...	...	...	...	...	...	...	15										
T. J. Trowsdale	Nuisances abated after Notice	3	62	3	...	1	...	...	29	7	7	48	...	...	14	...	1	1	...	3	179									
BARNARD CASTLE—	Population, 4,606	...	1	...	...	...	...	3	...	5	2	2	12	2	...	5	33	1	...	...	7	...	...	...	...	5	5	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	7	1	...	1	...	1	5	2	2	12	2	...	5	33	1	...	...	72										
H. E. Raine	Nuisances abated after Notice	...	8	1	...	1	...	4	5	2	2	15	2	...	5	33	1	...	...	79										
BENFIELD SIDE—	Population, 8,000	78	22	3	1	...	...	2	10	1	3	5	3	...	8	...	...	2	...	1	139	...	...	...	...	10	10	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	20	...	1	...	...	...	10	1	3	2	...	...	...	...	...	...	...	23										
Thomas Knox	Nuisances abated after Notice	78	22	3	...	...	...	2	10	1	3	3	...	8	...	...	2	...	...	1	136									
BISHOP AUCKLAND—	Population, 13,472	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	50	...	...	...	...	1	31	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	15	...	2	...	...	...	66	...	1	20	4	1	7	3	...	...	...	6	125									
Isaac Sanderson	Nuisances abated after Notice	...	5	...	2	...	...	...	49	...	1	10	4	1	5	3	...	...	...	5	85									
BLAYDON—	Population, 29,200	7	134	21	2	4	1	...	151	14	4	22	80	...	1013	4	...	4	...	...	1464	1	1	1	...	217	188	1	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	1	138	7	...	...	...	...	99	6	2	145	85	2	7	1	...	...	...	493										
Robert Biggins	Nuisances abated after Notice	8	272	28	2	4	1	...	250	20	6	167	165	2	1020	5	...	4	...	...	1957									
BRANDON & BYSHOTTLES—	Population, 18,674	3	11	26	...	7	...	3	198	6	...	32	6	1	22	1	...	...	...	25	341	...	...	...	...	253	101	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
William Ward	Nuisances abated after Notice	2	36	13	...	4	...	10	444	6	...	109	27	1	25	1	...	...	...	71	749									
CHESTER-LE-STREET—	Population, 15,651	6	17	3	1	1	5	...	71	3	10	9	5	3	13	1	3	2	...	13	166	...	...	1	...	...	23	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	...	...	...	1	...	...	5	...	...	...	...	...	...	...	...	...	...	7										
William Ridley	Nuisances abated after Notice	6	17	3	1	1	4	...	65	3	9	8	5	3	12	...	...	...	...	12	154									
CONSETT—	Population, 11,349	...	...	...	...	...	...	...	3	3	...	...	...	...	4	...	...	...	...	70	80	...	...	...	...	...	13	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	...	...	...	4	...	4	...	...	...	...	...	...	...	...	...	...	...	8										
William S. Shell	Nuisances abated after Notice	...	...	...	...	...	...	...	3	3	...	...	...	...	4	...	...	...	...	70	80									
CROOK—	Population, 12,000	...	7	5	...	6	...	7	32	3	6	12	7	...	21	...	2	...	...	8	116	...	...	...	...	...	83	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
E. W. Ayton	Nuisances abated after Notice	...	7	5	...	2	...	5	157	3	9	23	7	...	16	...	1	...	...	6	241									
FELLING—	Population, 28,323	4	42	3	...	1	1	...	117	5	12	10	9	4	41	4	...	1	...	35	289	1	...	...	...	109	26	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	2	...	...	...	...	...	3	...	...	...	...	2	...	...	...	...	...	8										
Henry G. Baldock	Nuisances abated after Notice	4	42	3	...	1	1	...	117	5	12	10	9	4	41	4	...	1	...	35	289										
HEBBURN—	Population, 23,577	52	33	4	...	1	...	4	34	7	2	63	7	2	...	4	2	7	...	9	231	...	...	3	...	89	111	8	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	7	...	...	...	...	...	3	...	...	...	...	...	1	...	...	...	...	16										
R. S. Thomson	Nuisances abated after Notice	50	30	4	...	1	...	4	34	7	...	63	7	2	...	4	2	7	...	9	224										
HETTON-LE-HOLE—	Population, 15,000	24	7	5	...	...	...	1	30	3	22	7	5	...	43	...	...	...	...	33	180	...	...	...	...	All.	All.	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	5	57	3	2	...	6	...	25	1	14	38	1	...	...	...	2	...	...	154										
John Harding	Nuisances abated after Notice	29	38	7	2	...	4	...	32	4	28	20	6	...	40	...	2	...	...	27	240									
HOUGHTON-LE-SPRING—	Population, 10,250	1	75	...	3	...	...	...	139	...	23	...	...	...	23	84	...	1	...	100	449	...	...	1	...	15	27	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	3	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5										
John W. Holbrook	Nuisances abated after Notice	4	75	2	3	...	...	...	139	...	23	...	...	...	23	84	...	1	...	100	454									
LEADGATE—	Population, 4,900	...	8	...	...	1	...	...	6	...	2	3	...	...	...	...	...	...	...	20	...	...	...	...	All.	All.	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	...	...	...	...	...	...	3	...	2	3	...	...	...	...	...	...	...	16										
William Robson	Nuisances abated after Notice	...	8	...	...	...	...	...	3	...	2	3	...	...	...	...	...	...	...	16										
RYTON—	Population, 12,425	...	7	6	...	1	...	...	27	8	4	16	...	...	21	1	2	1	...	2	96	...	...	...	...	...	43	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	2	...	...	...	...	...	1	...	...	1	...	...	11	7	...	...	...	12										
John P. Dalton	Nuisances abated after Notice	...	8	6	...	1	...	...	27	6	4	7	...	...	19	8	2	1	...	2	91									
SEAHAM HARBOUR—	Population, 15,000	12	...	18	6	2	...	6	5	...	1	19	21	2	...	...	...	...	...	24	116	2	...	...	...	12	42	2	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16										
James Burrell	Nuisances abated after Notice	12	...	18	6	2	...	6	5	...	1	19	35	2	...	...	...	...	...	24	130									
SHILDON—	Population, 14,272	...	2	...	...	...	...	1	12	5	...	11	6	2	51	...	...	...	...	90	...	...	...	...	51	84	...	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	...	...	...	...	...	...	1	14	...	11	4	...	5	...	1	...	...	1										37
Middleton Turnbull	Nuisances abated after Notice	...	2	...	...	...	...	1	3	5	...	9	8	2	56	...	1	...	...	1										88
SOUTHWICK-ON-WEAR—	Population, 15,148	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	68	68	1	...	...
Inspector of Nuisances—	Formal Notices by Order of Authority	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Walter B. Thomas	Nuisances abated after Notice	...	46	...	...	...	...	1	1	5	74	31	43	...	46	23	...	2	...	88	360									
SPENNYMOOR—	Population, 16,930	2	51	4	...	2	...	...	45	8	2	21	7	4	18	...	...	1	...	13	178	...	...	...	...	9	21	4	1	1
Inspector of Nuisances—	Formal Notices by Order of Authority	...	9	2	...	...	...	...	8	1	1	7	...	...	4	...	...												

INSPECTORS' REPORTS - URBAN.

URBAN DISTRICTS.		PUBLIC HEALTH ACTS—NOTICES SERVED AND NUISANCES ABATED.																				WATER, FOOD, AND DRUGS.				PRECAUTIONS AGAINST INFECTIOUS DISEASE.					
		DWELLING-HOUSES AND SCHOOLS.			Lodging-houses.	Dairies and Milk-shops.	Cowsheds.	Bakelhouses.	Slaughter-houses.	Adapts and Privies.	Deposits of Refuse and Manure.	Water-closets.	Defective Yard Fittings.	HOUSE DRAINAGE.			Pigsties.	Animals Improperly Kept.	Offensive Trades.	Smoke Nuisances.	Other Nuisances.	TOTALS.	Samples of Water taken for Analysis.	Samples of Water condemned as unfit for use.	Seizures of Unwholesome Food.	Convictions for Exposing or Selling Unwholesome Food.	Lots of Infected Bedding Stowed or Destroyed.	Houses Disinfected after Infectious Disease.	Schools Disinfected after Infectious Disease.	Prosecutions for Exposure of Infected Persons or Things.	Convictions for Exposure of Infected Persons or Things.
		Foul Conditions.	Structural Defects.	Over-crowding.										Defective Traps.	No Disconnection from sewers.	Other Faults.															
AUCKLAND— Population, 61,120 Inspectors of Nuisances— J. Little and J. D. Dowson	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	13 10 23	244 74 258	15 9 20	...	...	5	...	...	205 122 223	189 ...	9 ...	232 75 219	42 8 50	59 ...	129 41 147	1 ...	2 ...	...	...	11 ...	1156 339 1213	...	...	...	...	185	242	...	...	...
BARNARD CASTLE— Population, 12,118 Inspector of Nuisances— Robert Brown	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	2 1 2	34 1 34	2 2 2	...	...	7	...	2	41 1 42	40 ...	6 ...	9 5 4	5 ...	...	30 1 30	2 ...	1 ...	...	...	6 6 6	187 6 186	4	2	...	...	87	58	2	...	...
CHESTER-LE-STREET— Population, 63,869 Inspectors of Nuisances— J. B. Brown, R. J. Swad- dle, and J. E. Harrison	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	34 2 26	450 8 694	24 4 30	...	1	23 1 1	...	1	494 39 448	46 ...	14 ...	267 6 148	5 1 5	1 ...	222 2 255	11 ...	...	26 ...	...	88 2 76	1607 71 1905	...	...	...	...	...	...	...	...	...
DARLINGTON— Population, 9,591 Inspector of Nuisances— William Pallister	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice .....	...	29 4 29	2 ...	...	3	5 6 7	...	...	26 ...	18 ...	3 ...	12 ...	7 ...	...	14 3 15	3 ...	4 ...	6 ...	...	2 13 2	134 13 133	9	5	...	...	16	41	1	...	...
DURHAM— Population, 29,676 Inspector of Nuisances— James Menzies	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice .....	...	35 ...	...	...	79	79 ...	...	11	...	4 ...	...	128 ...	...	...	...	6 ...	...	7 ...	...	9 ...	358 ...	6	2	...	...	100	100	...	...	...
EASINGTON— Population, 58,777 Inspector of Nuisances— William Emery	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	11 5 10	44 7 42	5 7 12	4	...	11 1 12	...	7	23 12 25	21 ...	...	24 7 22	28 ...	24 ...	53 3 56	2 ...	2 ...	1 ...	...	111 1 112	371 37 381	10	10	...	...	3	42	...	...	...
HARTLEPOOL— Population, 2,555 Inspector of Nuisances— W. Burton	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice .....	...	...	...	...	1	...	1	7	2 ...	...	2 ...	6 ...	...	4 ...	2 ...	1 ...	...	...	...	26 2 26	...	10	2	...	...	...	10	5	...	...
HOUGHTON— Population, 24,400 Inspector of Nuisances— W. Morley	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	6 1 5	47 16 49	1 ...	...	2	...	...	63 17 65	8 ...	4 ...	23 5 24	...	...	65 9 65	19 3 20	4 ...	1 ...	...	...	20 4 28	266 55 279	7	2	...	...	23	62	...	...	...
LANCHESTER— Population, 32,109 Inspectors of Nuisances— J. R. Lupton and G. W. Westgarth	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	1 ...	484 30 476	26 27	...	19	...	22	278 149 268	426 ...	3 ...	121 59 96	...	...	58 21 55	5 ...	...	1 ...	...	...	271 132 271	1715 418 1669	...	...	2	...	...	...	...	...	...
SEDGEFIELD— Population, 32,488 Inspectors of Nuisances— J. Stones and G. S. Thompson	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice .....	...	26 86 49	2 ...	3	116	...	1	113 ...	18 ...	...	91 85 41	...	49 ...	...	2 ...	4 ...	4 ...	...	456 ...	885 172 330	7	1	...	...	2	51	...	...	...
SOUTH SHIELDS— Population, 12,672 Inspector of Nuisances— William Welsh	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	33 2 34	12 53 42	...	...	21	...	5	23 96 96	17 3 18	17 2 17	10 42 9	12 16 14	2 2 2	7 18 10	8 3 4	5 ...	7 2 8	...	84 ...	263 271 383	...	...	...	...	45	88	2	...	...
STOCKTON— Population, 19,211 Inspector of Nuisances— J. Franklin	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	5 ...	68 1 69	1 ...	6	19	3	4	84 2 86	5 ...	6 ...	25 19	19 ...	...	124 1 123	9 ...	1 ...	4 ...	3 ...	...	12 5 12	398 ...	5	1	...	...	...	130	3	...	...
SUNDERLAND— Population, 30,632 Inspector of Nuisances— Ernest Hitchen	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	54 ...	74 12 60	...	...	1	13	3	...	1 227 275	60 ...	15 10 19	9 30 39	1 2 6	1 ...	47 1 48	19 ...	1 ...	...	...	47 300 616	...	...	3	...	39	263	1	1	1	
WEARDALE— Population, 9,851 Inspector of Nuisances— W. Morley Egglestone	Informal written Notices by Inspector Formal Notices by Order of Authority Nuisances abated after Notice	2 2	3 3	1 ...	...	9	...	7	...	27 ...	...	...	...	...	...	12 ...	6 ...	...	...	19 ...	64 33 88	1	1	...	...	35	...	...	...	...

TABLE C1

INSPECTORS' REPORTS - URBAN.

URBAN DISTRICTS.		PUBLIC HEALTH ACTS—NOTICES SERVED AND NUISANCES ABATED.																				WATER, FOOD, AND DRUGS.				PRECAUTIONS AGAINST INFECTIOUS DISEASE.						
		DWELLING-HOUSES AND SCHOOLS.			Lodging-houses.	Dairies and Milk-shops.	Crowds.	Bakchouses.	Slaughter-houses.	Adapts and Privies.	Deposits of Refuse and Manure.	Water-closets.	Defective Yard Drains.	HOUSE DRAINAGE.			Water Supply.	Pigs.	Animals Improperly Kept.	Offensive Trades.	Smoke Nuisances.	Other Nuisances.	TOTALS.	Samples of Water taken for Analysis.	Samples of Water condemned as unfit for use.	Seizures of Unwholesome Food.	Convictions for Exposing or Selling Unwholesome Food.	Lots of Infected Bedding Stowed or Destroyed.	Houses Disinfected after Infectious Disease.	Schools Disinfected after Infectious Disease.	Precautions for Exposed Infected Persons or Things.	Convictions for Exposed Infected Persons or Things.
		Foul Conditions.	Structural Defects.	Over-crowding.										No Disconnection from Sewers.	Other Faults.																	
AUCKLAND—	Population, 61,120	13	244	15	...	...	5	...	...	205	189	9	232	42	59	129	1	2	...	...	11	1156	...	...	...	...	...	...	...	...	...	...
Inspectors of Nuisances—	J. Liddle and J. D. Dowson	10	74	9	...	...	...	...	...	122	...	...	75	8	...	41	...	...	...	...	...	339	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	23	258	20	...	...	3	...	...	223	189	8	219	50	59	147	1	2	...	...	11	1213	...	...	...	...	...	...	...	...	...	...
BARNARD CASTLE—	Population, 12,118	2	34	2	...	...	7	...	2	41	40	6	9	5	...	30	2	1	...	...	6	187	...	...	...	...	...	...	...	...	...	...
Inspector of Nuisances—	Robert Brown	1	1	2	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	2	34	2	...	...	7	...	2	42	37	6	9	4	...	30	3	2	...	...	6	186	...	...	...	...	...	...	...	...	...	...
CHESTER-LE-STREET—	Population, 63,869	34	450	24	...	1	23	...	1	494	46	14	267	5	1	222	11	...	26	...	80	1697	...	...	...	...	...	...	...	...	...	...
Inspectors of Nuisances—	J. B. Brown, R. J. Swad-	2	8	4	...	...	1	...	...	39	5	...	6	1	...	2	5	...	...	...	2	71	...	...	...	...	...	...	...	...	...	...
	dle, and J. E. Harrison	26	694	30	...	1	29	...	1	448	45	9	148	5	1	255	11	...	26	...	76	1905	...	...	...	...	...	...	...	...	...	...
DARLINGTON—	Population, 9,591	...	29	2	...	3	5	...	...	26	18	3	12	7	...	14	3	4	6	...	2	134	...	...	...	...	...	...	...	...	...	...
Inspector of Nuisances—	William Pallister	...	4	...	...	...	6	...	...	...	...	...	...	...	...	3	...	...	...	...	13	...	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	...	29	2	...	3	7	...	...	26	18	3	10	7	...	15	3	3	5	...	...	133	...	...	...	...	...	...	...	...	...	...
DURHAM—	Population, 29,676	...	35	...	...	79	79	...	11	...	4	...	128	...	...	...	6	...	7	...	3	358	...	...	...	...	...	...	...	...	...	...
Inspector of Nuisances—	James Menzies	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	...	35	...	...	72	72	...	11	...	4	...	20	...	...	...	6	...	7	...	9	236	...	...	...	...	...	...	...	...	...	...
EASINGTON—	Population, 58,777	11	44	5	4	...	11	...	7	23	21	...	24	28	24	53	2	2	1	...	111	371	...	...	...	...	...	...	...	...	...	...
Inspector of Nuisances—	William Emery	5	...	7	...	...	1	...	...	12	1	...	7	...	...	3	...	...	...	...	1	37	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	10	42	12	4	...	12	...	7	25	22	...	22	28	24	56	2	2	1	...	112	381	...	...	...	...	...	...	...	...	...	...
HARTLEPOOL—	Population, 2,555	...	...	...	...	...	1	...	1	7	2	...	2	6	...	4	2	1	...	...	26	...	...	...	...	...	...	...	...	...	...	...
Inspector of Nuisances—	W. Burton	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	...	...	...	...	...	1	...	1	7	2	...	2	6	...	4	2	1	...	...	26	...	...	...	...	...	...	...	...	...	...	...
HOUGHTON—	Population, 24,400	6	47	4	...	2	...	...	...	63	8	4	23	...	...	65	19	4	1	...	20	266	...	...	...	...	...	...	...	...	...	...
Inspector of Nuisances—	W. Morley	1	16	...	...	...	...	...	...	17	...	...	5	...	...	9	3	...	...	...	4	55	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	5	49	4	...	2	...	...	...	65	8	4	24	...	...	65	20	4	1	...	28	279	...	...	...	...	...	...	...	...	...	...
LANCHESTER—	Population, 32,109	1	484	26	...	19	...	22	278	426	3	121	...	...	58	5	...	1	...	271	1715	...	...	...	...	...	...	...	...	...	...	...
Inspectors of Nuisances—	J. R. Lupton and G. W.	...	30	27	...	...	...	...	...	149	...	...	59	...	...	21	...	...	...	...	132	418	...	...	...	...	...	...	...	...	...	...
	Westgarth	1	476	27	...	18	...	22	268	426	3	96	...	...	55	5	...	1	...	...	271	1669	...	...	...	...	...	...	...	...	...	...
SEDGEFIELD—	Population, 32,488	...	26	2	3	116	...	1	113	18	...	91	...	49	...	2	4	4	...	456	885	...	...	...	...	...	...	...	...	...	...	...
Inspectors of Nuisances—	J. Stones and G. S.	...	86	...	1	...	...	...	...	...	...	85	...	...	...	...	...	...	...	...	172	...	...	...	...	...	...	...	...	...	...	...
	Thompson	...	49	2	3	115	...	...	43	18	...	41	...	49	...	2	4	4	...	...	330	...	...	...	...	...	...	...	...	...	...	...
SOUTH SHIELDS—	Population, 12,672	33	12	...	...	21	...	5	23	17	17	10	12	2	7	8	5	7	...	84	263	...	...	...	...	...	...	...	...	...	...	...
Inspector of Nuisances—	William Welsh	2	53	...	...	32	...	...	96	3	2	42	16	2	18	3	...	2	...	...	271	...	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	34	42	...	...	35	...	5	96	18	17	9	14	2	10	4	5	8	...	84	383	...	...	...	...	...	...	...	...	...	...	...
STOCKTON—	Population, 19,211	5	68	1	...	6	19	3	4	84	5	6	25	19	...	124	9	1	4	3	12	398	...	...	...	...	...	...	...	...	...	...
Inspector of Nuisances—	J. Franklin	...	1	...	...	...	...	...	2	1	...	...	...	...	...	1	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	5	69	1	...	6	19	3	4	86	6	6	24	19	...	123	9	1	4	3	12	400	...	...	...	...	...	...	...	...	...	...
SUNDERLAND—	Population, 30,632	54	74	...	...	1	1	...	1	60	15	9	9	4	1	47	19	1	1	...	47	344	...	...	...	...	...	...	...	...	...	...
Inspector of Nuisances—	Ernest Hitchen	...	...	12	...	1	13	3	...	227	1	10	30	2	...	1	...	...	...	...	300	...	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	54	60	12	...	2	12	3	1	275	16	19	39	6	1	48	19	1	1	...	47	616	...	...	...	...	...	...	...	...	...	...
WEARDALE—	Population, 9,851	...	...	...	...	...	...	...	...	27	...	...	...	...	...	12	...	6	...	...	19	64	...	...	...	...	...	...	...	...	...	...
Inspector of Nuisances—	W. Morley Egglestone	2	3	1	...	9	...	...	...	8	...	4	...	...	...	6	...	...	...	...	33	...	...	...	...	...	...	...	...	...	...	...
	Nuisances abated after Notice	2	3	1	...	7	...	...	...	27	8	...	2	...	...	12	2	5	...	...	19	88	...	...	...	...	...	...	...	...	...	...

